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ART. I.—*Cholera, as it appeared in Clarksville, Tennessee; with Reflections.* By Dr. E. B. HASKINS.

In my letter of the 10th of March, I refrained from offering any views of my own with regard to the pathology of Asiatic cholera, as well as from making any suggestions respecting the treatment of the disease, having never, at that time, seen a case professionally. Since that time, however, cholera has visited our town in quite a marked character, and having taken some share in its management myself, I proceed to give a somewhat detailed accout of its invasion and spread, type or character, the treatment employed, the results, etc. To which I will add some reflections, which I trust will not be unacceptable to the readers of the Journal.

The disease made its appearance here on the 16th of March, and disappeared about the 27th. During that time the physicians reported to the board of health (composed of Drs. Donoho, Cooper, and myself) sixty-six cases, and eighteen deaths.

The information given to the physicians, as a guide for them in making out their reports to the board of health, was, that no case would be received as a case of cholera, where the symptoms were simply those of diarrhea without the rice-water characteristic, and unattended with exhausting influences, vomiting or cramps; but that all cases of diarrhea, even if unaccompanied with puking or cramps, or both, *if the discharges have the rice-water characteristic, and be attended with progressive weakness and exhaustion*, would be received as cholera cases.

Notwithstanding the care exercised to procure correct statistics, it is possible, owing to the difficulty necessarily attending the diagnosis of a disease, the first, and most important stage of which simulates so nearly other disorders, that a few cases may have been reported which were not of epidemic origin; but it is believed that others were left out of the reports, having such origin, and therefore the number reported may be regarded as very near the truth.

In the invasion and spread of cholera over our town, numbering about three thousand inhabitants, we have been unable to detect anything resembling the invasion and spread of a contagious disease. In the very beginning of the epidemic, several individuals, residing in different portions of the town, and having had no communication with one another, were attacked about the same time; and during its whole continuance, the cases appeared to arise irrespective of any proximity to the sick or their residences, the nurses of the sick, and inmates of the same apartments, escaping in nearly all instances.

The disease having already prevailed for some time previously in both the cities of New Orleans and Nashville, and the steamboats daily landing passengers and merchandise upon our wharves, we were furnished with no facts upon which to found a conclusion as to whether it was brought up or down the river;* or what time intervened from the dissemination of the poison, to its manifestation in disease. One fact more should be stated, and that is, that no patient with cholera had been landed here, and that our first patients of cholera had seen no cases of that disease.

The disease prevailed principally among the negro and destitute white population, and but few women or children of any class were subjects of the malady. No white persons residing in the more cleanly portions of the town, and enjoying the ordinary comforts of life were attacked, except a few, who were predisposed to gastro-enteric irritation, and even they, without exception, recovered. Disturbances of the healthy action of the stomach and bowels prevailed very generally.

The weather, for several weeks prior to the invasion of the epidemic, had been cloudy and rainy, with sudden alternations of temperature, from warm to cold days, and *vice versa*. The atmosphere for most of the time was hazy.

Symptoms and progress. The first stage, or stage of serous evacuations, was ushered in by diarrhea, more or less violent, consisting, in the beginning, of feces dissolved in the intestinal serosity, giving the discharges, after the first two or three evacuations, the appearance of dirty soapsuds; which appearance, as the disease progressed, was gradually lost in that of the well-known

* Clarksville is situated on the Cumberland river, 65 miles below Nashville.

rice-water discharges. Sometimes vomiting and muscular spasms appeared very early in this stage; but generally they were later and announced the near approach of the second stage. Vomiting and cramping, however, were both often absent in this stage. In a large majority of the cases, the first stage was not a rapid one, the serous evacuations continuing from twelve to forty-eight, and, in one of my own cases, seventy-two hours, before the accession of the second stage forced the patients to take their beds and make known their condition. A few cases, however, were much more rapid, the first stage lasting only some six or eight hours. The pulse in this stage seldom underwent any perceptible alteration; the appetite was gradually lost, and the tongue was slightly coated with a white fur.

The second, or cold stage, or stage of depression, came on with feelings of more or less exhaustion; with restlessness, the patient often tossing violently from side to side; cool and shrunken surface, sometimes dry; but generally a dewy perspiration stood upon the face and breast, and later, when collapse announced the termination of this stage in death, the whole body was bathed in a cool sweat; features sharpened; eyes sunken, dull, and heavy; voice weak and husky; tongue cold, flabby, and without moisture; frequent craving of cold drinks; pulse but little accelerated, depressed, and feeble, generally eighty or ninety, (I found it in one fatal case one hundred and twenty); urinary discharges slight, or entirely suppressed; serous evacuations sometimes continued unabated, but for the most part they were mitigated and sometimes entirely controlled; retching generally continued through this stage; cramps were aggravated until near its termination, when, in most cases, they ceased to give annoyance.

In those who died in this stage, the exhaustion and

sinking gradually increased, when collapse supervened, carrying the patient off in a state of quiet insensibility. In those who survived the second stage, after the successful arrest of the serous evacuations, the subsidence of the spasms, etc., the third, or febrile stage, or stage of reaction followed. The pulse gradually rose in fulness, and slightly increased in frequency, beating from ninety to a hundred in a minute; warmth was gradually diffused over the skin; the tongue became lively and moist; craving for cold water grew less; and in those cases that recovered, the dejections were freely mixed with bile; the kidneys resumed their function; the appetite returned, and after a few days of moderate fever, health was restored. But in those that proved fatal, the kidneys never resumed their proper action:* thirst continued more or less to harrass the sufferer, and in twelve or twenty-four, and sometimes as late as forty-eight hours or upwards, after reaction was established, a drowsiness supervened with more or less delirium, but without any complaints of the head; the conjunctival membrane became red, and the pupils of the eye permanently contracted; the respiration reduced in frequency, (in one case to eight in the minute,) as the stupor deepeend; the bowels were discharged involuntarily; tracheal rattle set in, and the patient died in a state of profound coma, from the second to the fourth day of reaction.

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* Notwithstanding the dissections in this and in other countries too clearly prove that the fatal stupor which supervenes in this stage, is dependent upon inflammatory (?) congestion of the brain and its membranes, yet may not urea and the urates (after the arrest of the serous evacuations, which, perhaps, were conducting off, by this channel, the nitrogenous effete matters), have some agency in determining the burthen of morbid action to this organ?

Post-mortem examinations.—But two dissections were made. In one, by Dr. Cooper, of a patient who died in the third stage, with symptoms of pneumonia, the right lung was found hepatized at its base; no other organs were examined. The other dissection was made by Dr. Finley and myself, in the presence of Drs. Cooper, Donoho, and McDaniel. This was a well-marked case of fatal coma in the third stage. The membranes of the brain presented extensive and extreme venous and capillary engorgement, with about four ounces of fluid in the base of the cranium; the ventricles contained no fluid;* no other cavity was opened.

Treatment.—The basis of our treatment consisted in the use of calomel, opium, and quinine, with such adjuncts as each practitioner selected to suit his own peculiar views. I will only, however, give a detailed account of the treatment pursued by myself and partner, Dr. W. M. Finley.

In the first stage, we relied mainly upon the horizontal posture, and the internal exhibition of calomel and opium—two grains of the former and one of the latter, made into a pill and given every half hour, or hour, until the evacuations were controlled, or the specific action of the opium was induced, with the free use of cold or warm diluents, according to the desire of the patient. When the evacuations were very frequent or abundant, from two to four of the calomel and opium pills were given for the first dose, and repeated, one at a time, as first mentioned. When this treatment was not sufficiently prompt in its action to give assurance of the prevention of the second or cold stage, we gave, along with the cal-

* It may be proper to state that between the hemispheres of the brain a well organized ossific deposit was found on the inner surface of the dura mater, twice the size of the thumb nail,

omel and opium pills, quinine in five grain doses, or sulph. quinine and pulv. camphor *ää* five grains. Ice seemed to control the vomiting better than anything else. To allay the spasms we used chloroform as follows:

Chloroform, ʒj.
Mucilage of gum arabic, ʒvij. Mix.

A teaspoonful in an ounce or more of ice water every fifteen or twenty minutes, until the spasms are allayed, or intoxication induced. This treatment, when early applied, scarcely failed in a single instance to prevent the accession of the cold stage, and cure the patient in a short time.

In the second stage, besides such remedies as have already been mentioned for the arrest of serous evacuations, relief of cramps, etc., we used warmth to the surface by means of hot bricks, pillows, and bottles filled with hot water, placed around the body and about the extremities of the patient.

In one case of collapse we tried the cold dash with apparent benefit; the patient who, before, was throwing himself about from side to side, with a cold damp skin, and nearly pulseless arm, was calmed; the pulse rose, and warmth partially returned to the surface; but we were unable to maintain the advantage, and he finally died.

In the third stage, to prevent and relieve the inflammatory congestion of the brain, we relied mainly upon topical bleeding from the nape of the neck, and between the shoulders, followed by blisters, hot foot-baths of mustard and salt, and cold applications to the head. We never, however, relieved a case, after the supervention of this condition.

Reflections. 1. *The Statistics of Cholera.*—The point in the statistics of cholera to which I wish particularly to invite attention at this time, as not the least

embarrassing, is the frequent neglect of indicating, in the various reports, the group of symptoms recognized as constituting the disease *malignant cholera.* When, in the concatenation of morbid developments, from the simplest form of the first stage, to the collapse of the second stage, on the one hand, and reaction and visceral hyperemia of the third stage, on the other, does cholera commence? Some writers, it is true, speak of the diarrhea as the first stage of cholera; but others call it the premonatory symptom. Hence it is obvious, that the disease reported as *cholera* will show a very marked difference in its rate of mortality, according as cases recovering in the first stage be reported as such or not.

That the stage of serous evacuations is a part of the diseased action originating from the impression of the same poison that causes the second and third stages, perhaps no one will question. Indeed, being the nearest phenomenon to the cause, it is the most proximate effect; the other two stages being further removed are more remote effects; besides, this stage constitutes the most essential characteristic of the disease, since it is less frequently absent, if absent at all, than any other abnormal phenomenon; and hence the claims of science as well as public policy demand that cases recovering from this stage, if *clearly of epidemic origin*, should be embraced in the statistics of cholera. By this means alone can we be made acquainted with its actual and relative ravages, mortality, etc., and the actual and relative proportion of cases dying and recovering in the different stages.

In this way will the first and most important, but less alarming stage, be given that prominence which is necessary to its early and prompt attention; and by the exhibition of the true rate of mortality, and the success of medicine we shall allay the fears of the affrighted, as

well as inspire confidence in medical treatment; both of which ends are so requisite to the successful management of the disease.

2. *Cause and Prevention.*—I have already offered for the consideration of the readers of the Journal, a theory of the propagation and spread of cholera, which in my humble judgment merits some consideration. (See May number.)

Acting upon the probability of the truth of this theory, the indications of prevention would be, first, to remove all sources of organic effluvia practicable; secondly, to prevent, as far as possible, the introduction of the cholera ferment; and thirdly, to prevent or arrest the process of effluvial fermentation.

The first indication will, of course, be best met by cleaning up and removing, or destroying by combustion, all organic matter in a state of decomposition, or a state subject to decomposition, from streets, alleys, ditches, sewers, cellars, pools, and other depositories of such remains; and by removing from closets and sleeping apartments, dirty clothing, and other accumulations of animal excrementitious matters. The second indication will be fulfilled by quarantine regulations; and the third, by the liberal use of unslacked lime in damp places, lime whitewashing of fences, cellar walls, the outside and inside of out-houses, and the trunks of trees, so as to present as extensive absorbing surface as possible; and the sprinkling over the floors of basement-rooms, privies, etc., with chloride of lime, or chloride of zinc. These means may the more earnestly be insisted upon, as they all tend, independently of their effects upon the poison of cholera, to the preservation of health.

3. *Nature and Treatment of Cholera.*—Because cholera is not successfully treated in its most aggravated

form, or in its last and most fatal stages, it is generally believed that its pathology is less understood, if understood at all, than, perhaps, any other of the acute diseases; and that therefore no reliable treatment can be deduced from its nature, nor from the experience and observation of the profession.

Without arrogating to myself the ability to offer a theory of the pathology of this disease, it may not be uninteresting to make some inquiries as to what we do know of cholera, in comparison with our knowledge of some other more familiar acute diseases, the treatment of which is, to a considerable extent, governed by professional authority. In the first place, it may be affirmed that notwithstanding post mortem dissections seldom fail to disclose certain anatomical changes in some of the viscera of the head, thorax, and abdomen; yet it is scarcely contended by any one that cholera is essentially a local disease. That the local determinations are subsequent to a general constitutional disturbance, is a doctrine pretty generally admitted, I believe. So far then, the nature of cholera is no more obscure than that of bilious fever, pneumonia, rheumatism, and many other acute febrile diseases. Again, that this general constitutional disturbance has its principal location either in the vascular or nervous system, or partly in both, deranging, as a consequence of functional dependance, the secretory, excretory, and nutritive functions, would scarcely, I presume, be denied by any one; and in this also, cholera is no less understood than bilious fever, yellow fever, etc. And again, that this general constitutional disturbance, with subsequent derangement of the functions of the peripheral vascular system, produces* in

* Perhaps it would have less the appearance of hypothesis to say that those manifestations succeed one another, rather than that one produces the other, as facts are mainly considered.

rapid succession, certain local determinations made manifest by their peculiar signs and symptoms, is also a matter of almost universal observation, and in this too cholera is as well understood as many other diseases more familiarly known to the profession.

Of the essential nature of cholera, the nature and seat of the first link in the chain of morbid phenomena, and the nature and seat of the various successive links, and their relationship as cause and effect, ingenious and plausible theories may be framed; but nothing satisfactory is known, or probably can be known, in the present imperfect state of physiological and pathological science; nor can more be said of any other disease.

On the accession of any new disease, presenting a group of morbid phenomena, common to other, and familiar diseases, the prudent and enlightened practitioner would, undoubtedly, after a careful analysis of the symptoms, prescribe such remedies as the analogy of the morbid phenomena present, to those of other familiar diseases, would seem to indicate. This has been done in the case of cholera, and it is now my purpose to inquire whether or not the profession have been deceived in the result. In the first stage, or that of serous evacuations from the stomach and bowels, opiates, astringents, and by many calomel, have been used, from their acknowledged powers over such phenomena in other diseases. Have these remedies met the reasonable expectations of the profession? I think they have. There is, perhaps, not an opinion more common upon any subject of therapeutics, than that the first stage of cholera, if early attended to, can be easily controlled by some form or combination of these remedies. It would be unreasonable to expect that a disease, which if left without treatment, runs so rapidly and certainly a fatal course, should be relieved as promptly as diseases of a less fatal tendency.

But this is not the entire view of the subject. It becomes a question with the medical practitioner of no slight importance, whether in the sudden arrest of this discharge nature may not be defeated in her efforts to free the circulating mass of a morbific matter, and though the immediately exhausting effects of the loss of the vital fluids may be averted, yet other, and perhaps equally fatal results, may supervene from its retention in the circulation. Nor does experience allay such fears; for often, after the arrest of the serous evacuations, and the reaction of the system from the depressing stage, another fearful pathological development displays itself in drowsiness, delirium, and, too often, fatal coma. That the evacuations should be lessened in frequency, and amount, is clearly manifest; for if allowed to flow unchecked, they most certainly prove fatal in a short time, as the mortality amongst the careless and ignorant too sadly testifies.

Then it seems to me that the point of greatest practical importance consists in so directing our remedial agents, that, whilst we arrest and control the too copious flow from the stomach and bowels, we open up some other less exhausting channel for the elemination of deleterious matters; and calomel, from its unquestionable powers in exciting the function of secretion, would seem to offer, upon rational grounds, the surest prospect of meeting the indications required. By exciting the action of the glandular structures, the current of morbid fluxion is directed from the gastro-intestinal mucous surface, and the vital organs are at the same time protected against the retention of a fatal poison. Another reason why calomel should form a part of the treatment of the first stage of this disease is, its known resolvent powers over inflammatory action, and particularly of the

brain and its membranes;* and hence the propriety of its timely administration to meet, as well as avert, the exigencies of the stage of reaction. Nor does experience contravene these views of the efficacy of mercury in cholera, but on the contrary greatly strengthens them; for although its use is opposed by some of high authority, there is no one remedy, opium, perhaps, excepted, which has a deeper hold upon the confidence of the profession, in the treatment of cholera, than calomel.

In the second, or cold stage, analogy, as well as rational considerations would justify the use of external warmth, diffusible stimuli,† etc.; and notwithstanding the results have not been as satisfactory as desired, yet they still have the confidence of the profession. This is the depressed stage of a most fearful malady, and it is scarcely to be expected that remedies would control it as readily as the cold stage of diseases not considered grave.

The stage of reaction has received less attention from the profession than the two preceding stages. Some have failed to notice it, owing to its absence in some localities and seasons, or else to its having been overlooked, or regarded as an accidental development. From its character, however, as displayed in the epidemic of this place, as well as from the testimony of those whose opportunities for observation have been best, it may be remarked that when unaccompanied by local determinations, but little treatment is required. But owing often to the insidious invasion of local disease of an almost certainly fatal termination—often making its appearance

*Notwithstanding dissections have not conclusively established the presence of inflammation in the cranial contents, yet the redness of the conjunctiva, and contracted state of the pupils, together with the post-mortem appearances, render such a conclusion at least probable.

† Brandy and alcoholic tinctures, however, were hurtful in our hands.

when least expected—of course the greatest vigilance is requisite to conduct the patient through this stage.—When the state of the circulation would seem to justify it, moderate bleeding, general or local; warm stimulating pediluvia; cool applications to the head; mercury in small doses; febrifuge drinks; and the prohibition of every thing calculated to excite the brain, as conversation, noise, light, etc.; and when symptoms of local disease arise, topical bleeding, blisters, etc., would appear, both from the analogy of symptoms, and the observation and and experience of the profession, to constitute the most approved and reliable treatment.

Since writing the above, my friend and neighbor, Dr. N. L. Thomas, a physician of very accurate observation, has kindly furnished me with the details of an interesting case of cholera which recovered after the accession of delirium and stupor in the stage of reaction; and although a single case will not establish the efficacy of any treatment, yet, from the happy termination of the case, the treatment certainly deserves further trial. My space will only allow of a quotation from his interesting letter, referring to this particular condition. Dr. Thomas says: "About three or four o'clock, in the afternoon of the 29th of March, 1849, my patient, a wagoner, commenced driving his teams; the delirium increased till it ran into a profound stupor, in which state I found him this morning (30th). His pulse about ninety, full and strong; respiration only six in the minute; pupils contracted and immovable; no stools. Took about a pint of blood from the arm; gave ten grains of calomel, and applied cold to the head. Soon after, commenced giving fifteen grains of carb. potash every two hours, day and night. In the afternoon applied cups to the back of the neck, which bled freely: about night shaved

his head and applied a blister plaster all over it." On the first day of April, the stupor was very nearly gone, respiration twelve a minute. The carb. potash was now discontinued, and a pill composed of one grain of calomel and two of quinine was given three times daily. He gradually recovered.

"I was induced to use the carbonate of potash," says Dr. Thomas, "from seeing it recommended in cerebro-spinal meningitis by Dr. Ames, of Mobile, Alabama. It is sometimes used in jaundice, and is supposed to promote the biliary secretion. It appeared to me to act in this case as a sudorific and diuretic, which I omitted to mention."

Clarksville, May 15, 1849.

ART. II.—*Two Cases of Nephritis produced by over doses of Balsam Copaiba.* By DAVID W. YANDELL, M.D., of Louisville, Kentucky.

CASE I.—Mr. R. McK., a native of Ireland, aged 33 years, of lymphatic temperament and delicate constitution, sober and temperate habits, presented himself at my office on the 6th of May, complaining of a severe pain in the small of his back. A few weeks before leaving Ireland (in the fall of 1848) he contracted a blenorrhagia, for which he had used, as he expressed it, almost every known remedy without any benefit, unless it was a change in the character of the inflammation from a very violent and acute to a more mild and subacute degree. The drug of which he used the largest quantity and continued for the greatest length of time, was balsam copaiba. This, he declared, he had taken in ta-

blespoonful doses three times a day, for two weeks together, without any unpleasant symptoms or any amelioration of the disease. Despairing, finally, of curing himself, he consulted a quack, who ordered him to resume the copabia, commencing with drachm doses four times a day, gradually increasing the quantity till the stomach revolted. He had been pursuing this treatment about three weeks when I saw him. At this time he was taking four tablespoonsful of the balsam in the twenty-four hours. The blenorrhagic discharge had entirely ceased two days before, but for four days previous (the 1st of May,) he had been considerably annoyed by the appearance of pains in the lumbar region, which, at first vague and not very severe, had rapidly increased in intensity and extent until they became almost intolerable, radiating downwards from the last dorsal vertebra to the pelvis and right leg, as far down as the knee, being most severe immediately over the right kidney and along the course of the spermatic cord and testicle of the same side, which was considerably retracted. The urine wich was voided very frequently, was accompanied during its flow, by a sensation of burning in the urethra, was deeper colored than natural, occasionally mixed with blood, and affording, after it had been discharged, a very strong odor of the balsam.

In addition to these symptoms, the patient complained of very great debility and general lassitude, almost constant nausea, and general uneasiness; had a slight chill every evening towards bedtime, which was followed by fever that continued during the greater part of the night. His appetite was gone; thirst very great; bowels costive; expression of countenance anxious, and general appearance that of a man much too unwell to be going about.

Notwithstanding this train of symptoms was rather more intense than that which sometimes follows the protracted or excessive use of copaiba, I contented myself

with forbidding its further use, and enjoining rest, diluent drinks, anodynes, a purgative, and a suspensory bandage, hoping that, in removing the suspected cause, I should succeed in curing the disease.

Four days afterwards, the patient returned with the symptoms materially the same as when I first saw him. Contrary to my directions, he left the city in a few hours after his second visit for Cannelton, Ia., where he had obtained a situation in the factories, and I have not since heard from him.

The history of case II is complete; the symptoms are more clearly marked, and its value consequently is much greater than that of the one above reported, the termination of which I have not been able to give.

Case II.—The subject of this was a gentleman, 25 years old, of good constitution, and general robust health, though of somewhat irregular habits, being occasionally addicted to excesses in drink, who contracted, about five years ago, a blennorrhagia from which he has never since been entirely free. In the treatment of this affection, which from its mildness had long since almost ceased to attract his attention, he had used a great quantity and almost incredible variety of medicines, and among others, very large doses of balsam copaiba. Finding, after two or three years of almost continual medication, that the blenorrhagic disease still evinced its existence by an occasional discharge, amounting generally to a single drop of opake mucus, observed only on getting up in the morning, or after indulgence in venery, or a glass too much of brandy, he despaired of ever being entirely freed from it and ceased taking medicine altogether. Things continued in this way until the 14th of the present month, when he determined to adopt a plan of treatment, although it had failed before after repeated

trials, which was suggested to him by one of his friends. This consisted in taking half ounce doses of balsam copaiba three times a day.

He found, greatly to his delight, that the first three doses of the copaiba seemed to cut short the disease, though it left him with a dull, heavy pain in the loins, extending to the left leg, spermatic cord, and testicle of the same side, frequent desire to urinate, and a scalding sensation during the act. He took no more copaiba, but resorted to hip baths on going to bed. His condition not improving, he called at my office on the evening of the 16th and desired me to prescribe for him. Trusting, as in the former case, very much to nature, I directed him to stop the baths, take diluents and a purgative, wear a suspensory bandage, apply a belladonna plaster over the seat of the greatest pain, use light diet, and rest in the recumbent posture, all of which, except the latter, he most strictly observed.

On the 17th, the patient was somewhat alarmed at the appearance of blood in the urine, and, at my earnest solicitation, promised to keep his room. Upon examining the kidneys by pressure through the walls of the abdomen, I discovered great tenderness over the organ of the left side. The spermatic cord and testicle of that side were also extremely tender and painful, and it appeared to me somewhat tumefied. These latter symptoms belonging rather to epidydimitis than to nephritis, I began to suspect that the case might be of this nature, and accordingly, the patient being unwilling to submit to any other treatment, resorted to local applications to the parts, in the form of poultices, a lotion of equal proportions of laudanum and belladonna, diet, and elevation of the testicle.

18th. Patient passed a restless night; tongue coated; mouth dry; skin hot; pulse quick; urine, passed at short intervals, high colored and mixed with blood; pain and

tenderness undiminished; considerable nausea. Notwithstanding my representations to the patient of the gravity of his disorder, I could not induce him to allow me to practice venesection, which, under the circumstances, I deemed advisable. Nor would he listen to the application of leeches, or the administration of emetic tartar, but, after much persuasion consented to being cupped, which operation was performed very extensively over the region of the kidneys. The belladonna and laudanum were continued, and cloths dipped in the solution were applied over the scarifications. He took, also, until his bowels were freely moved, a tablespoonful, every two hours, of the following mixture:

℞. Magnes. ℥iss.
Gum acacia,
Sacc. alb. ää q.s.
Aq. ℥iv.
Pil. hydrarg. gr.x.
Ant. et potass tartrat. gr.iv.
Tinct. rhei, ℥ij.
Ol. anis. gtt. iv.

In addition to the above, I prescribed half a tablespoonful, four times a day, of

℞. Infus. digital., ℥iv.
Tinct. digital., ℥j.
Tinct. opii, gtt. x.
M.

19th. Passed a more comfortable night; general appearance much improved; called up once to stool, complained of having experienced a sense of chilliness, followed by fever in the early part of the night; tongue natural; skin moist; less pain and tenderness; urine voided less frequently, no longer mixed with blood, but still high colored. Ordered frictions over the internal surface of the left thigh, testicle, and spermatic cord with equal parts of unguent. hydrarg. fort. and extr. bel-

ladon.; belladon. and laud., and digital. mixture continued as before. Ten grains of quin. sulph., pulv. ipecac. c., and five grains of hydrarg. submur. ordered for 5 P.M.; diet and diluent drinks.

20th. Patient had no fever, as on previous evening; slept well till towards day, when he was twice up to stool; tongue clean; some appetite; kidneys much less active; urine less high colored, indeed almost natural; pain subsided; still some tenderness. Quinine, calomel, and Dover's powder omitted; the local applications continued, as was the diuretic mixture, though in diminished quantity; patient allowed tea and toast.

21st. Patient rested well; has a good appetite; tenderness, except on long continued pressure, entirely gone; secretion of urine and the urine itself natural. Ceased my visits.

Dr. Cullen, in his Nosology, gives the following definition of nephritis: "Pyrexia; pain in the region of the kidneys, often following the course of the ureter; frequent desire to pass urine, which is either limpid or colorless, or very red; vomiting; numbness of the leg; retraction or pain of the testicle of the same side."

M. Rayer, in his very valuable work entitled *Traité des Maladies des Reins*, recognizes four varieties of the disease, named according to the parts of the kidney implicated.

1. *Nephritis*, where the gland itself is inflamed.
2. *Pyelitis*, where the pelvis and calices are the parts inflamed.
3. *Perinephritis*, where the inflammation is in the investing membrane.
4. *Pyelonephritis*, where both the pelvis and the granular structure are involved.

While pure idiopathic nephritis is acknowledged, by

most writers to be a disease of very rare occurrence, symptomatic nephritis is by no means uncommon. Its most usual exciting cause arises from the tubuli uriniferi, the pelvis, or canal of the ureter, being obstructed or dammed up by the presence of calculi, or calculous matter. "But it may arise from other causes, as from a blow, or a bruise, or strain, from severe exercise, long confinement in a recumbent posture, plethora, *acrid diuretics*, excess in the use of spirituous liquors, poisons, etc."

The most usual effects of copaiba, when given in too large quantities, are, we presume, diarrhea, certain eruptions upon the skin, vomiting, which is caused either by an insurmountable repugnance, or by gastric irritation; and it may even produce enteritis, several cases of which Ricord is in the habit of mentioning in his clinical lectures.

In the translation of the lectures of this eminent surgeon, by Victor de Meric, the following paragraph occurs: "Copaiba may likewise give rise to lumbar pains, which have so often been mistaken for symptoms depending on urethral mucitis. Patients placed under the influence of this substance are often attacked by a sharp pain in the lumbar region, which they compare to the reception of repeated blows. Do not fall into error on this head, and be careful not to set this down as blennorrhagic nephritis, as some have done. For if renal blennorrhagia were looked upon as the cause of these, it would turn out to be a very frequent complication of the disease; whereas, on the contrary, it is extremely rare. A proof of the correctness of the opinion which ascribes the lumbar pain to copaiba alone, may be obtained in a couple of days in most of the cases we have to treat. Let the drug be given up and all the uneasiness in the back will disappear, thereby dispelling the idea that it

depended upon the extension of the blennorrhagia of the kidneys."

My own experience coincides with that of M. Ricord. In a number of cases which I have seen, many of the symptoms of nephritis during the administration of copaiba disappeared in the course of forty-eight hours after the drug was relinquished, and in all these instances the lumbar pains began to diminish, sometimes before, and always after the lapse of twenty-four hours. I have now under treatment for blennorrhagia two young gentlemen, one of whom had diarrhea, the other vomiting, and both lumbar pains, developed during the use of copaiba. On its being given up, all these unpleasant symptoms subsided. In the two cases reported, these pains, and the other symptoms denoting high inflammation of some portion of the genito-urinary apparatus, if not of the kidneys themselves, not only did not subside, but absolutely grew worse after the copaiba had been discontinued, in one of them four days, and in the other three days; and in both recovery was favored by diluents, a purgative, diet, and anodynes. The cessation of the use of copaiba, in ordinary cases, is alone sufficient to allay in a short time the lumbar pains produced by its administration. In the two cases just related, notwithstanding it had been discontinued for a much greater length of time than usually suffices for their disappearance, the lumbar pains, with the other symptoms, continued steadily and rapidly to increase in intensity.

May 30, 1849.

ART. III. — *Cases of Thoracic Disease.* By Dr. THOMAS C. OSBORNE, of Erie, Alabama.

CASE I. *Tubercular Phthisis—death from cerebral embarrassment.*—Patsy, a black woman, aged 27 years, is the girl noticed as the second in my cases of dropsy, published in this journal (2d series, vol. 7, page 238.)

After recovering from the ascites her health was apparently better than it had been at any time during the amenorrhea, but the menses never returned up to the period of dissolution. The most remarkable circumstance in her history, however, is the fact that she was never known to complain of cough or pectoral uneasiness, and, with the exception of the catamenial interruption, she was regarded as one of the most healthy among the field hands by her owner, who even attributed this defect to the action of the "polypody," or "cotton-root tea," which, it was believed, the negro women were in the habit of using to prevent child-bearing.

On the 13th of November, 1845, she was attacked with acute headache, attended with a furred tongue and obstinate constipation, for which I ordered an emetic of ipecac., to be followed at proper intervals, by purgative doses of calomel and jalap, until the bowels were sufficiently evacuated.

On the 15th, although still complaining, she was ordered to her work, and noticed no more until the 20th, when I was requested to ride into the field and see if anything ailed her; for it was thought she was inclined to dissemble and avoid labor in that way. She had then a vacant and troubled expression of the eyes; irregular and tremulous motion of the hands, dry, hot, and ashy skin; fiery tongue, with a heavy brown fur down its center; parched lips; thirst; frightened and broken pronunciation; hurried breathing; extremely feeble, quick, and

frequent pulse; tenderness in the epigastrium; nausea; loss of appetite, and constipated bowels. She was sent to the house, bled, cupped over the temples and pit of the stomach, had a warm stimulating bath, and afterwards a sinapism over the spine and abdomen; took thirty grains of calomel, combined with five grains of ipecac., to be assisted in four hours, if necessary, by an ounce of castor oil.

21st. No better. Bowels freely opened by medicines, and dejections are of a bilious character. Pulse the same. Reapply cups and sinapisms.

22d. Became delirious last night, and while the nurse slept stripped off her clothes and laid down on the floor at the back part of the house, where she was found next morning cold and almost pulseless; with muttering delirium; subsultus tendinum; picking at the bed clothes; eyes filmy and thrown back. Frictions with hot mustard, pepper, and turpentine; blisters to extremities and scalp; calomel in ten grain doses every four hours; gruel enemata.

23d. Worse. No action on the bowels since the 21st; blisters have failed to vesicate; stupor and insensibility. She died about midnight.

Necroscopy, twelve hours after death. Head.—Meninges extremely vascular, and turgid with black blood. Brain natural. Lateral ventricles vascular, and contained an ounce or more of yellowish serum.

Thorax.—The principal seat of organic lesion was found in this cavity, where, in truth, it was least expected. The costal and pulmonary pleura, over the anterior and lateral parts of the right lung, were loosely adherent by several patches of unorganized lymph, while the posterior portion was united so tenaciously that it was impossible to separate the tunics with the edge of the knife without constant mutilation. The pleural sur-

faces were free posteriorly on the left lung, but there were anteriorly two spots of false membrane, an inch in diameter, of recent formation. The lungs were engorged, and when pressed a bloody froth issued from every point of the incision. Tubercles, of various sizes and in great abundance, were found in the superior lobes of both lungs; none of them, however, had the least appearance of softening. Heart normal.

Abdomen.—The stomach was stained with a single patch of the speckled discoloration, of diminutive size, near the pylorus. Liver and intestines healthy. Spleen enlarged and very firm. The omentum (especially the gastro-colic) and mesentery were excessively vascular, and turgid with red blood, so much so that the natural color of the tissue was almost obliterated. An immense number of miliary granulations were also found in them.

It is sufficiently proved that tubercle sometimes destroys its victim before the stage of softening is established, by inducing inflammation of the pulmonary tissue; but it is not equally clear that the presence of this heterologous formation in one part may kill the patient by exciting a fatal determination in a distant organ, as the foregoing case would seem to imply.

CASE II. *A case of Anemia, with the physical signs of heart disease.*

The subject of this case is a boy 8 years of age, with light hair, blue eyes, and cadaveric complexion. The anemia under which he is suffering dates back two years. It has been constantly growing upon him since that time, owing, no doubt, to the fact that he has been brought up in a low marshy district, which is inundated with every swell of the Warrior river, where he has for the last four years suffered repeated attacks of intermittent fever, followed by enlargement of the spleen, and looseness of the bowels. The tallow complexion, bloodless lips,

swollen abdomen, and shrunken extremities, give him the appearance of a stealthy "dirt-eater," but I am assured that this is a practice from which he is entirely free.

December 18th, 1848. Called to-day: learned that during the month previous he had frequent and some very protracted fits of fainting, each followed by more or less severe palpitation, and that now it is impossible for him to walk across the floor without a return of them. There is no appetite; the bowels are sluggish; restlessness at night, and his sleep is disturbed by frightful dreams; mental apathy; foul tongue; offensive breath, and edematous condition of the inferior extremities.—Upon carefully exploring the case the following were the principal results obtained: High grade of fever; pulse 132, of inferior development, regular, equal, and synchronous with the ventricular contraction of the heart; thirst; tongue pale and furred; bowels inactive; hurried respiration, and occasional hacking cough. Percussion elicited nothing unusual. The first sound of the heart loud, audible at the distance of three feet, and communicating by its impulse a notable jar to the bedclothes; bellows sound heard near the sternum, intense and prolonged, occupying the second time and completely masking the auricular sound; respiratory murmur normal; deep inspiration excites cough, and uneasiness in the precordial region.

Prescription.—Dry cups over infra-scapular region; sinapisms on front of chest; hot foot-bath.

℞. Calomel grs. ii.
Ipecac. gr. i.—M.;

to be repeated every three hours.

20th. Better. Medicines have been regularly administered, and free purging of fecal and bilious matter followed the fourth dose. Skin slightly moist; fever diminished; pulse 110; headache relieved; sounds and im-

pulse of the heart decreasing in intensity; some appetite. Give the medicines every five hours, and one hour after each dose a wineglassful of the following mixture: hyd. potass., grs. xvi; citrat. ferri, grs. xxxii; aqua font, Oi. Mix.

22d. Improving. Give midicines three times daily; nourishing diet.

30th. Convalescent. Sounds of heart normal. Respiration easy. Appetite good. Omit former medicines, and give mur. tinct. ferri, three times daily. Dismissed.

CASE III. *Acute Pleuritis.*—At the date of the following notice, Influenza prevailed rather epidemically in this vicinity; many of the cases of which disease, being neglected, ran into a high grade of inflammation in the pulmonary apparatus, as this and the subsequent examples will partially attest.

January 3, 1849. Called to prescribe for Miss P., aged 16 years, who has, for several days, had the prevailing influenza, and was taken this evening, after exposure, with violent pain in the left side, dyspnea, etc. Saw her three hours subsequent to the attack: pulse 120, full and hard; considerable fever; hurried and difficult respiration; pain in the left mammary region; distressing cough, with copious expectoration of thick, tenacious mucus, which had existed three or four days; tongue clean, and bowels regular. On applying the stethoscope over the seat of the pain, a sound of friction came up from a surface of about two inches in diameter; respiratory murmur on same side rather distinct; on the right side there was a subcrepitant rhonchus at the summit, which gradually diminished as the exploration was carried towards the base of the right lung. Ordered venesection ad deliquium animi. The patient replaced in bed, and a large sinapism applied over the left side,

after which she took one hundred drops of laudanum in a glass of lemonade.

4th. Rested well all night; felt no return of the pain since the bleeding; thinks she is quite as well as before the attack.

CASE IV. *Influenza.*—D. L. McCoy, carriage maker, aged about 30 years, was taken with chilly sensations and shivering, followed by high fever, on the 31st of January, 1849. Saw him on the 2d of February. There is acute headache, redness of the eyes, with intolerance of light and sound, pain in the back, pains and soreness in the chest, dyspnea, cough, with expectoration of thin acrid mucus, sneezing, coryza, thirst, hoarseness, sore-throat, red tongue, costiveness, and a pulse beating one hundred, full and bounding.

Prescription.—Venesection 30 ounces.

℞. Syr. tolu.,
Paregoric, ää ℥i,
Vin. ant., ℥ss;

Dose—A tablespoonful every hour.

Cooke's pills at bedtime, immediately after rising from tepid bath.

3d. At work; feels well except weakness; pills acted finely.

CASE V. *Hemoptysis—Tertian Fever.*—January 14th, 1849, called to John, a mulatto, aged 18 years, short, thick stature; has had several severe attacks of febrile disease in the course of the last few years, and is extremely liable to 'take cold;' had, occasionally, hacking cough. While lifting a heavy weight, on the 10th inst., complained of feeling, on a sudden, as if 'something broke loose in the right side.' A chill, succeeded by high fever, cough, and bloody expectoration came on soon af-

terwards, which passed off in the next twelve hours with free perspiration. On the 13th, another chill with greatly aggravated fever, etc. Condition now as follows: hot and dry surface; thirst; red and fissured tongue; tenderness in epigastrium; pulse 90, full and compressible; cough every few minutes; expectoration consists entirely of florid blood, which is brought up easily and in considerable quantities.

Physical signs.—No dullness on percussion; subcrepitant râle, with large bubbles well personated at summit anteriorly of right lung, which gradually diminishes as the base is approached; posterior portion, respiratory murmur rather strong. In the left lung the normal murmur was unembarrassed.

Treatment.—Venesction 25 ounces. Sinapisms to pit of stomach.

℞. Nitrat. potassa, ℥i;
Mucilage slippery elm, Oi;

M. Dose—a tablespoonful every three hours.

Cooke's pills at bedtime, and quinine as soon as sweating appears.

15th. About as yesterday; feels very weak and faint. Pills brought away several bilious discharges. Complains more of pain at pit of the stomach; continues to cough up blood freely; has not sweated. Apply wet cups to epigastrium, and follow them with another mustard poultice. Continue the nitrate of potash, and give five grains of sulphate of quinine every two hours until he has taken six doses.

16th. Much better. Skin moist and pleasant; commenced sweating last night; cough less troublesome, and expectoration merely streaked with blood. Subcrepitant rhonchus persists, but is much less noisy. Continue nitre, and give quinine again to-morrow.

CASE VI. *Broncho-pleuro—Pneumonitis.*—Jackson, a mulatto, aged 23 years, with rather scrofulous diathesis, had chills some two or three weeks since, from which he was slowly recovering when attacked with influenza, which, however, did not seriously incapacitate him until last night, (March 25, 1849,) when he was suddenly seized with a sensation of stricture across the chest, distressing dyspnea, high fever, pain in the frontal region, aggravated by almost continual cough, which was attended with copious expectoration of thick, yellowish, tenacious mucus; retching, and lancinating pain seated near the left mammary region.

Saw him on the morning of the 26th, four hours subsequent to the attack. Pulse 90, full and hard; respiration 30, and jerking; hot and dry skin; thirst; furred tongue, and constipation of the bowels; mucous rhonchus abundant and present over all the anterior portions of both lungs, but strongest on superior lobes; posteriorly puerile respiration; sound of friction on a small space outside of left nipple; vesicular murmur superficial on the lateral portion of the right lung, between the third and sixth ribs, occupying a surface of about three or four inches in diameter. Percussion elicited nothing unusual.

Treatment.—Venesection to 35 ounces. Cups to eight ounces from right side, and afterwards apply sinapisms over front of chest.

℞. Hyd. chlorid. mitis, grs.x.
Pulv. ipecac., grs.viii.
Pulv. opii, grs.ii.
M. et divid. in pil. x.

Give one pill every two hours.

4 o'clock, P.M. Feels better. Pulse 84; respiration 25. Has slept, and is sweating freely. Physical signs the same, except the friction sound, which is absent. No action on bowels.

Prescription.—Continue pills, and give alternately with them a tablespoonful of the following syrup:

℞. Tart. potas. et antim., grs.vi.
Tinct. scillæ, ℥ii.
Tinct. camph. c. ℥i.
Syrup. tolu, ℥viii. M.

Tepid pediluvium. Gruel enemata until the bowels have acted.

27th—8 o'clock, A.M. Worse. Exacerbation of fever came on after midnight; pulse 96; respiration 33; bowels relieved. Mucous râle heard only at summit of left lung anteriorly; condition of right lung persistent. Treatment the same.

5 o'clock, P. M. Pulse 106; respiration 33; thirst; physical signs same as last noticed. Ordered 10 ounces of blood to be taken from the right side by cups, to be repeated in five or six hours, followed by application of mush poultice. Saline aperient; tepid foot bath; mucilaginous drinks. Continue medicines.

28th—10 A. M. Passed a restless night; pulse 104; respiration 28; tongue red; several bilious evacuations since last visit. Normal murmur established in left lung: absence of crepitating râle, and, in its place, a tubular whiff; percussion dull at that point in right lung.

Treatment.—Venesection 12 ounces, to fainting. Sinapism to right side, to be followed by repeated mush poultices. Continue medicines.

6 o'clock, P.M. Pulse 90; respiration 25; cough and expectoration unchanged. He has not complained of pain since the first bleeding, except such as was occasioned in the frontal region by cough. The tubular whiff still continues. Ordered a blister over right lung. Continue the medicines as before.

29th. Passed a comfortable night; says he feels better. Pulse 84; respiration 27; tongue cleaning off; still

sweats freely. Crepitant rhonchus heard in subclavicular and axillary regions of left lung. Prescribed a sinapism over left lung. Continue medicines.

30th. Pulse 112; respiration 29; blister healed. Physical signs same, except a slight improvement in subclavicular region of left lung. Warm bath; reapply blister; saline aperient. Continue medicines.

31st. Feels better. Pulse 100; respiration 28; urine clear and free; appetite good; slight salivation; says the warm bath relieved him more than anything that had been done. Crepitant rhonchus disappearing in left, and some improvement in condition of right lung. Continue syrup and ipecac., omitting calomel.

April 1st. Some nausea and vomiting of bile; fever; perspiration; pulse 96; respiration 35; puerile respiration in left lung, and sonorous râle and bronchophony in superior portion of right lung; ptyalism disappeared. Continue treatment, adding blue mass to ipecac.

2d. Pulse 88; respiration 36. Continue treatment, and give five grains sulph. quinine every three hours.

3d. Condition unchanged; continue treatment.

4th. Worse. High fever; stomach rejected quinine; pulse 96 and feeble; respiration 43; subcrepitant râle loud and noisy, in both acts of respiration, in right clavicular region, and sonorous rhonchus beneath the nipple. Mucous râle also in superior left lung. Ordered a blister over both lungs anteriorly; omit quinine; continue other medicines.

5th. Consultation with Dr. Jennings. Pulse 96; respiration 36, and more thoracic, mouth sore; physical signs nearly the same. Omit syrup, and give brown mixture, with teaspoonful doses of citrated solution of carb. ammon.

6th. Pulse 84; respiration 33.

℞. Syrup. senegæ, ℥viii.
Syrup. scillæ,
Tinct. camph. c. ää ℥i. M.

Dose—a tablespoonful every two hours, adding the solution of ammon. carb.

7th. Pulse 100; respiration 32; mucous râle disappearing, and bronchial respiration more abundant in both lungs. Continue treatment.

8th. Pulse 80; respiration 32; bronchial respiration extending; fever diminished.

9th. Pulse 96; respiration 23; bronchial respiration loud and apparently cavernous.

11th. Improving. Pulse 82; respiration 26.

14th. Continues improving. Pulse 88; respiration 26. Omit pills, and continue syrup.

20th. Physical signs of bronchial dilatation greatly diminished in intensity and area. Convalescence fully established.

Some of the cases of neglected influenza terminating in pneumonitis were so destitute of the characteristic symptoms that the real nature of the disease was not suspected, until post-mortem inspection revealed the distinguishing lesions. Of such a kind is the following instance, which, I am assured by the attending physician, was so insidious in its advances that, until forty-eight hours prior to dissolution, the patient continued to go about, with very little appearance of pulmonary suffering.

Case VII. *Necroscopy, thirteen hours after death.*—March 24, 1849, permitted to inspect the body of Peggy, a black woman, aged about 50 years.

Muscular rigidity incomplete; entirely absent in neck; some degree of animal heat remaining on the anterior and posterior portions opposite the heart. Abdominal fulness, but emaciation of the rest of the cadaver. On separating the flaps, made in the ventral parietes, the enormous dimensions of the liver arrested attention; it extended below the umbilical and filled up the hypochon-

driac regions. It was of a greyish color and very firm, almost grating under the knife. Gall bladder contained a small quantity of black bile.

Stomach.—Near the cardiac aperture, on the mucous surface, there was a patch of purple discoloration an inch in diameter; several smaller patches with considerable intervals were disposed over the great curvature. At the pyloric extremity were many small spots and patches of the diffuse and dot-like stain, of intense redness. Spleen and intestines healthy.

Thorax.—Anteriorly on both lungs the pleura were loosely united by several diminutive adhesions,—posteriorly the adhesion was tenacious and complete from base to summit. Heart normal. Lungs.—Gray hepatization in both; more extensive in the right; on scraping an incised surface, purulent matter exuded from minute points. About the roots and summit of both the lungs were crepitous, but in the latter parts there was quite a number of miliary granulations.

May 20, 1849.

Art. IV.—*A Case of Congenital Dropsy of the Cranial, Thoracic, and Abdominal Cavities, complicated with Spina-Bifida, impeding labor, and rendering perforation of the head necessary to accomplishing delivery.* By Dr. Thos. Lipscomb, of Shelbyville, Tennessee.

I was called, on the night of the 12th of April last, to visit Mrs. P., in consultation with my young friend, Dr. R. A. Coldwell. From Dr. Coldwell I learned that some forty-eight hours or more had elapsed since the commencement of labor, and that he had supervised her case in person for the last forty hours. He informed me

that her health was good, and that she had given birth to one child previously without extraordinary difficulty. The membranes had given way early in the morning of the day preceding the night of my visit. Dr. C. informed me that the pains had been strong and forcing, or protrusive in their character for some five or six hours, which characteristics were still manifest; that it was a presentation of the head, and that the os uteri was well dilated, but that there had been no advancement of the presenting part for some five hours.

Having received this brief detail, and witnessing the suffering of Mrs. P., and hearing her importunate cries for relief, I proceeded to make an examination, when I found the presentation somewhat embarrassing, as there was a large and fluctuating tumor which had entered the inferior strait, and above it could be felt a hard substance occupying each iliac fossa of the mother. After repeated examinations by myself and Dr. C., which probably occupied half an hour, we were enabled to determine the true character of the case, which was the following, viz: The soft fluctuating tumor was the scalp distended with fluid, and the more firm portions which seemed to occupy the iliac fossa were the parietal protuberances forced very widely apart by the accumulated fluid. After making this decision, (which Dr. C. had suspected before my arrival), and ascertaining that the different sutures were very widely separated, (the sagittal, for instance, two and a half or three inches) we were fully satisfied that nothing less than perforating the head and evacuating the fluid would be availing. This opinion was immediately communicated to the husband and friends of the lady, with the additional fact that, even if it were practicable to deliver by any other means, or were nature able to effect the delivery, the child could not possibly survive long, even if it were desirable that it should. They consented to the use of any means which

we thought necessary. I immediately proceeded with the perforating scissors to open the head, which gave exit to an enormous quantity of a semi-pellucid fluid. As it was discharged while the patient lay on her back in the bed the exact amount could not be ascertained, but I am sure it may be safely estimated at a gallon. The most of it being evacuated the head collapsed, and two or three pains effected the delivery.

The child was of about the ordinary size, judging from its arms, legs, neck, and face. The hydropic accumulation was accompanied by extensive spina-bifida, and an absence of three of the lower lumbar vertebra, and I am certain there was a perfect and free intercommunication between the cranial, thoracic, and abdominal cavities, as the thorax and abdomen presented the appearance of having been evacuated. The child evinced some signs of vitality after its delivery by slight movements of the arms and legs, but it did not cry. The circumstances surrounding this case did not admit of an examination of the internal organs, which we very much regretted.

The above case is not reported on account of any supposed novelty in the treatment of it, but on account of the comparatively rare occurrence of such instances. Since it occurred I have read with interest the case reported in this Journal by Dr. Prentis, in his account of which he alludes to an analogous case reported in a late number of the Boston Medical and Surgical Journal. Our patient has entirely recovered.

On a review of the case, I am persuaded that the operation was indispensable to its safe termination. The uterine contractions were powerful, but availed nothing towards the expulsion of the fetus. I am confident that it could not have been born without the reduction of the head.

Shelbyville, May 11, 1849.

REVIEWS.

Art. V.— *Obstetrics—the Science and the Art.* By Charles D. Meigs, M.D., Professor of Midwifery and the Diseases of Women and Children, in the Jefferson Medical College; one of the Physicians to the Lying-in Department of the Pennsylvania Hospital; Vice President of the Philadelphia College of Physicians; Member of the American Philosophical Society, of the American Medical Association, etc., etc. With 120 Illustrations. Philadelphia: Lea & Blanchard. 1849.

The above is the somewhat quaint title of a work on obstetrics by the gifted Professor of that department of medicine in the Jefferson Medical College. Professor Meigs has, within a few years, produced one work after another with a rapidity truly surprising, considering the amount of professional labor daily performed by him in the great capital of which he is one of the most popular practitioners. After his treatise on midwifery, of which the present is an enlarged edition, he translated the work of Colombat de L'Isére on the diseases of females, and added to it copious notes. This was followed, in a short time, by his own work on the same subject; and this, in less than a year, by the volume before us. While he has been writing these books, comprising several thousand pages, he has not only attended to his large practice, but gone on with his lectures, and found time to

contribute an occasional paper to the medical journals o the day. Such industry is worthy of all praise, and ought to be held up to the junior members of the profession for their imitation. The example of Dr. M. shows what a man by energy and determination can accomplish. Instead of making his laborious practice an excuse for neglecting his pen, he has made it the occasion of giving to the profession some of the best works produced in our country. But to return to the work before us.

It is divided into four parts, namely: the anatomy of the parts concerned in the acts of reproduction; the physiology of reproduction; the therapeutics and surgery of midwifery; the diseases of the young child.

It is not necessary to notice his account of the anatomy of the bony pelvis, nor shall we follow him through his description of the mechanism of labor.

In his third chapter he describes the form, size, sutures, and fontanels of the fetal head. Dr. M. holds that, rigorously speaking, there are but two presentations in midwifery "one of the head, the other of the pelvis." He regards presentations of the shoulder, arm, face, and forehead, as deviations from the vertex; those of the feet and knees as deviations from the pelvis.

Chapter fourth treats of the genitalia, and in the fifth chapter he gives an account of the anatomy and physiology of the ovaries, Graafian vesicles, and of the ova therein contained. In some of the opinions expressed concerning the nature of the corpus luteum the author is at variance with other microscopists, and renewed observations are necessary to settle the question as to its precise function.

As to fecundation, he thinks, with Pouchet, that it cannot take place in the ovaria, and yet he admits that it has been shown by Bischoff and Barry that the semen does ascend as high. We are not able to see how he can reconcile these contradictory statements. If the se-

men reaches the ovary, what objection is there to the "antiquated notions as to ovaric fecundation?" He is surprised that any one should cling to what he says Pouchet "has shown to be an impossibility." His readers, we think, will feel surprise that, with all the facts before him, many of which he adduces in his work, he should doubt that ovarian fecundation and ovarian pregnancy are both possible. Too many well authenticated cases are on record to admit any longer of doubt on the subject.

Dr. Meigs is devoted to the modern theory of menstruation, of which he gives a satisfactory account in his sixth chapter. According to this theory, ova at the age of puberty are matured in the Graafian vesicles, and continue to ripen until the female ceases to be capable of childbearing. They ripen periodically, and in women, for the most part, once in four weeks. During the last days of their development, the uterus becomes congested, increases in weight, and sinks somewhat lower in the pelvis. From this state of engorgement it is relieved by means of the menstrual hemorrhage.

This is a captivating view of the subject, and one could wish that it were divested of all difficulties. But it is met by serious objections. Dr. Ritchie, for example, asserts confidently, that maturation of ova takes place previously to puberty. He even goes so far as to say that they are matured during childhood. If this assertion is to be credited, it is evident that the cause assigned for the catamenia cannot be the true one.

It has been further objected, that ova are matured and expelled at other than stated periods. While Bischoff, Pouchet, and Raciborski, in all their examinations of females dying about the catamenial epoch found evidences of the maturation and expulsion of ova, Dr. Ashwell asserts that he found no such evidences in the ovaries of three females examined by him during the

menstrual flux. Others maintain that ovulation occurs, in the human female, at all periods, as well between as during the menstrual epochs; and this doctrine is in harmony with the fact that women seem to be susceptible of impregnation at all times of the intermenstrual period. Still, we are not prepared to abandon so easily a doctrine which has so much beautiful analogy to support it. We are inclined, despite the many facts urged in opposition to it, to hold to its validity. It is one of the theories which, if not true, one feels ought to be true. Why there should be this irregularity in the economy of nature—why in all the lower animals ovulation should be periodical, and only constant in the human female, it is not easy to perceive a reason. As in the inferior races there is a limit beyond which conception is impossible, and this is rigidly restricted to the few days or hours during which the female is in heat, so analogy would lead us to suppose that a woman cannot conceive after the lapse of a given period. Dr. Meigs is willing to believe with Pouchet, that the capacity is limited to the twelfth day; but, as he remarks, "time, and opportunity to observe, can alone settle this point." For the present we avow our inclination to embrace the new theory.

The chapter on amenorrhea is practical, and abounds in judicious views. The author indicates correctly the cause of the great empiricism shown in the treatment of the affection. He shows that it has grown out of a bad pathology. The proximate cause of amenorrhea has not been thoroughly investigated as, in every case, it is necessary to do. The state of the patient's health has not been carefully studied. If a woman's constitution "be brought into healthful play in all other regards, she will not be vicious or disordered in this instance, of menstruation." A woman is not unhealthy because she fails to menstruate, "but she fails to menstruate because she is unhealthy." This, we believe, is the true doctrine on

the subject. The cure, therefore, is to be sought in that act, or that article of the materia medica, which obviates the cause. Specific emmenagogues will not answer the purpose. That which would afford relief in one instance, in another would aggravate and confirm the disease.

The causes of amenorrhea are numerous; but the most productive, in the views of our author, is the "cessation of the force by which ovarian vesicles are evolved and matured." The vital action which brings the ova to maturity being destroyed, the catamenial hemorrhage, which is but a sign of the menstrual act, cannot appear. "The reproductive is a complementary force, and menstruation is a sign of the active state of that force." The amenorrheal girl is generally anemic; the system in anemia is not capable of developing the ovarian vesicles. The system of cure, in her case, is evident. It consists in the use of all the agents which correct anemia, and give tone to the economy. Aloes, especially, is indicated as an aperient, because it determines to the pelvic viscera. For improving the hematosis there is no article equal to iron.

Of the ferruginous preparations, our author prefers the impalpable powder of the metal, produced by passing a stream of hydrogen gas over the peroxide of iron heated to redness in a porcelain tube. He exhibits this in the form of pills weighing two grains, one soon after each meal. We agree with him, not only that iron is by far the most effectual remedy in all cases of amenorrhea in anemic subjects, but that, since the metal itself is the therapeutical principle, there is little advantage in exhibiting it in combination with any particular acid. We have found the peroxide a reliable agent in the anemic diathesis, and have also used the iodide with great advantage in such cases.

The next chapter treats of pregnancy, and at the beginning, the author "fully acknowledges his ignorance of the essential nature of fecundation." The germ is undoubtedly produced by the female, and it is nearly certain that this is a cell, as it is probable that the spermzoon is of the same nature. But which of these cells has the prëeminence, or is the true germ; which "is the primal solid in the generic or fecundative processes," are questions which no physiologist has yet answered, if, indeed, the mystery is ever to be understood.

"If conception take place in the womb, it is pregnancy —if out of the womb, it is extra-uterine pregnancy—in the Fallopian tube, tubal pregnancy—in the ovarium, ovaric pregnancy." Yet our author had expressed his surprise, in a former chapter, "that many able and distinguished writers still cling to the antiquated notions as to the ovaric fecundation, which M. Pouchet has shown to be an impossibility." As we have already remarked, we cannot see how these passages are to be reconciled. We wonder that they should have occurred in the same work.

The nearer to the close of the menstrua, the more likely is the congress of the sexes to result in fecundation; but conception does not necessarily follow; for the fecundated ovum may not effect its mesenteric attachment, but be discharged from the uterus and lost. When it becomes fixed, conception properly commences.

Dr. Meigs is convinced that ovulation occasionally precedes the menstrual flow, but that in the majority of cases it absolutely coincides, in period of time, with the first appearance of the hemorrhage. He very properly repudiates the notion, that it is connected, in any way, with the aphrodisiac orgasm, since the ovulative paroxysm is as decided in the virgin as in the married woman.

Referring, again, to the question, at what point does "the encounter of the sexual elements take place," he

says, "we do know that it may, and sometimes does, occur in the Fallopian tube." He thinks it possible that it may likewise occur within the womb itself, and suggests that the accidents of placenta previa may be "the results of a late fecundation, which admits of the fixation of the product upon the os uteri internum."

The author alludes, in this chapter, to the vomiting which often constitutes so troublesome an attendant upon pregnancy. In one case, this symptom persisted up to the time of confinement, and proved a serious hindrance to the progress of labor. The patient was a primipara, and although, as a general rule, he regards it as bad practice to rupture the membranes in such labors, he adopted the practice in this instance, and from the moment that it was done, "the nine-months' vomiting ceased and returned no more." The following case shows that, however distressing this concomitant may be, its consequences are not necessarily serious even where the danger seems to be greatest. He says:

"I attended a lady in Spruce street, a few years since, who, during nearly three consecutive months, appeared to vomit up every particle of her ingesta. It was her own opinion, coincided in by her friends and attendants, that the total amount of all her food and drinks returned very soon after they were swallowed. Although she felt much weakened, I could not perceive that, under this process, she lost her flesh, and in the end, she gave birth to a healthy daughter. It is apparent that she must have been nourished during this time—but the manner, and the quantity, have remained ever since a mystery that I cannot explain."

Many of these cases are curable by exercise, either on foot or in a carriage. In perhaps all, relief is derived from regulating the bowels, which are generally constipated. Tonics and alkalies are the remedies most generally resorted to, and the latter are nearly indispensable

as correctives of acidity. Dr. Meigs mentions a method of treating cases in which vomiting comes on early in the morning and ceases about noon, the rationale of which is not very intelligible. He assures us, however, that he has found the course successful; it is as follows:

"Let a cup of coffee, with a toast, be brought to the bedside at the earliest morning hour. The patient should be called from her sleep to take this preliminary breakfast, without rising from bed. As soon as it is taken let her lie down to sleep again, if possible."

Dr. Meigs dissents from the Hunterian doctrine with respect to the placenta, and contends, with Velpeau, in opposition to Professor Owen, that no part of this appendage belongs to the uterus, but that it is entirely fetal. He does not believe that there is a vascular connection between the placenta and the uterus. Many examinations have been made by him, and in none could he trace vessels passing from one to the other, and his conclusion from the whole is, that the placenta is not more adherent to the womb, "than is the peel of a perfectly ripe orange to the fruit." At the same time, he admits that there may be a strong argument in favor of the other view of the subject, and he states it at some length. It is very certain that no doctrine which had not many arguments to support it could ever have gained the advocacy of such physiologists as the Hunters and Prof. Owen; but it does not therefore follow, that theirs is necessarily the true doctrine. In such questions mere authority is nothing. These accurate observers may have been mistaken. At all events, as remarked by Dr. Meigs, one must be permitted to see with his own eyes.

A clear description is given of the fetal circulation, after which our author goes on to remark as follows:

"The branchial apparatus above described, suffices in all the mammals and birds to communicate to the constitution of the embryo the requisite amount of oxygen; but it ought to be observed that that amount is small, indeed, when compared with the freeness of the endowment vouchsafed to a state of respiratory existence. The embryo requires no more than what suffices to oxygenate its fluids and solids to the extent of provoking an active nutrition and impart a power of gentle and rare muscular motion—for the fetus in utero may be regarded as torpid, and as approaching in torpidity to the state of hybernating animals. To cut off even this slender supply is to ensure its destruction. Now, inasmuch as the placental blood, entering in at the umbilicus, passing by the ductus venosus to the inferior cava, along that tube to the auricle, and through the foramen Botalli to the left auricle, left ventricle, aorta, carotids and vertebrals to the brain, takes the only possible route from the placenta to the brain; it is clear that if, before the birth, the foramen ovale should be closed, no oxygen could possibly reach the brain; but oxygen in the brain is essential to the evolution of biotic force. When, therefore, no oxygen reaches the brain, the brain evolves no nerve force, and the patient being asphyxiated dies. The law, then, is that the fetus is born with an open foramen ovale, which becomes closed after birth, generally within three or four days, often in ten or twelve days, not rarely about the twentieth day, and sometimes never.

"I have said that the child's foramen Botalli remains open during the whole uterine life; but the student ought to observe that it is always covered by its valve, lying upon the left side of the septum—a valve so light and delicate as to be transparent, and so beautifully arranged as to enable it to cover the operculum in the most perfect manner. The weight of a drop of blood, resting on its right side, might lift, as a drop on its left surface might shut it down. The normal direction of the current through the foramen, keeps it open in the fetal heart.—When, therefore, after the child is born, the two auricles act at the same time, in equal times and with the same intensity, the valve is pressed upon the operculum to cut off the fetal route, and compel the whole of the right auricular torrent to pass to the right ventricle. If the left

auricle should be the strongest, the earliest, and the longest to contract, it is impossible that any black blood should come into it. If, on the other hand, the right auricle should, after the birth, contract sooner, longer, and more energetically than the left, the valve of Botalli would be lifted, and the black blood of the venous system, instead of returning by the pulmonary ventricle and artery to the lungs, would pass to the left auricle, ventricle, and aorta to inundate the neurine of the brain with its carboniferous stream, which, wholly incapable of exciting any biotic force in the brain, would be cyanosis—asphyxia—death. When the nervous mass ceases to act, the whole constitution is dead. It always ceases to act where there is no oxygen."

The circulation of the fetus, and that phenomenon which frequently presents itself in the new born babe, cyanosis, have been fruitful topics of discussion. We have quoted extensively from our author on this point, both because we like his views, and because the extract given affords a good specimen of the physiology in which his work abounds. The whole elaborate chapter on pregnancy will be read by the student with the deepest interest. Some of the diseases to which the child in utero is liable are mentioned in this chapter, and various kinds of monstrosity are illustrated by wood-cuts. Some of these afford, as remarked by Dr. M., curious subjects of reflection—"the individuality or duality of a creature with one head and two bodies, or with two heads and one body?" These are questions for the metaphysician. We quote a few paragraphs on this singular subject.

"Doubtless, it is not possible, in Teratology, to suppose that half of one child should sink into and be totally lost in half of another child, thus making out of two independent personal identities a single one. In nature, the union must take place from the liver upwards only, or from the liver downwards only; whence, it cannot happen that the whole right symmetrical half of the left twin

should be sunk in the left symmetrical half of the right twin. We may therefore expect to meet with cephalodym or hepatodym or pelvidym, and not with such a union of two personal identities as would be to fulfil the ancient fable of the union of Salmacis and her lover.

"All such fusions imply loss, not gain of substance; or monstrosity by default, and not monstrosity by excess.—If a child is born with six fingers on either or each hand, or six toes on either or each foot, it presents a case of excess of development or monstrosity by excess; and the samples of five-legged calves, &c., that are commonly met with, are cases of monstrosity by excess.

"There was a singular example of cephalodym here some four years ago: it was a healthy pig with one head, two fore legs, and two bodies, with four hind legs. It was a remarkable fact that the genitalia of this creature were not ruled by a common influence of its nervous systhem; when the animal was in heat, it was either as to the genitalia of the right or those of the left trunk; but they were not observed to be in heat or rut at the same time, one trunk appearing to become the subject of the periodical excitement about ten days after the other had ceased to be so. What was the condition of personal identity in this monster!"

In regard to the duration of pregnancy, our author entertains views that most of his brethren will consider latitudinarian—he believes that it may "endure even beyond twelve months." And analogy, it must be owned, is favorable to this opinion. The term of incubation of the barn-door fowl varies two or three days, and the term of utero-gestation in our domestic animals varies weeks and even months, according to the testimony of several observers. Brugnone found that the foaling of fifty-five mares took place at periods varying from ten to thirteen months. In one, it occurred before the completion of the tenth month, and in several it was delayed to within a few days of twelve months. Two mares foaled in 330 days, four in 336, five in 343, two in 352, one in 369, and one in 389—a difference between the most precocious and

most protracted gestation of two months and a half. Tessier found that in the gestation of 200 mares there was a latitude of 83 days. Grille found the difference 93 days, and others have found it as great as 97 days. In cows, a latitude of 23 days has been observed. These things being so with regard to the inferior animals, there seems to be no good reason why we should doubt the possibility of such variations in the human female.

The uterine muscles, in our author's belief, cannot be traced by the scalpel, however little their existence can be doubted by any one who has had occasion to attempt turning a child in a powerful womb. He has no faith in any of the representations given by the several writers who have professed to describe them. The discrepancies of these authors are such as to convince any one that the arrangement is not understood.

The prominent disorders and accidents incident to utero-gestation are alluded to in the close of this chapter, among which are obliquity, pressure of the womb on the vessels, anemia gravidi, moles, hydatid degeneration of the ovum, physometra, hydrometra, abortion, prolapsus, retroversion, and extra-uterine pregnancy.

The opening to the third part, or the therapeutics and surgery of midwifery, is in a very graceful and pleasing style. The young accoucheur is exhorted to consider seriously the delicate relations he is about to assume, in which so much tact, discretion, and good sense are necessary to success. Above all, he is cautioned against revealing professional secrets, and against that tone of familiarity to his patients which some affect, but which is so liable to be construed into impertinence, and is sure to offend the refined of the sex. The following incident is related as illustrative of the baneful effects of babbling:

"The great Caliph Al-Mamun, as we are informed by Abul-Pharajius, in his History of the Dynasties, was a

friend of science, and he exhibited his patronage, by fostering many learned men, among whom were some of our own profession.

"Among other of his medical favorites, was John Ocularius, whose duty it was to visit the Commander of the Faithful every day, and that in his most private apartment, alone.

"The caliph gave him great honor, and allowed him a monthly stipend of one thousand gold sequins for his services.

"Upon one occasion, as the physician came out of his master's apartment, in passing through an ante-room, he was asked by one of the servants, 'What is the caliph doing?' 'He is sleeping,' was the reply. But, unhappily, this reply was communicated to the successor of Mahomet, whereupon the culprit was sent for, and brought before the chief of Islam. 'What!' said he to the offender, 'have I employed you as my physician, and admitted you to my intimacy, in order that you should report to my servants as to my private occupations? Go out of my house.'"

The unfortunate physician, in relating this story, to account for his disgrace, added that Al-Mamun would never afterwards admit him into his presence; which, Dr. M. declares, "was the just punishment of a professional indiscretion;" and he adds—

"Let the student reflect upon the punishment deserved by those who babble the concerns of families or individuals. John Ocularius was turned out of the court of Al-Mamun for merely saying that his master was asleep!"

Labor, in the view of our author, has for its cause "the inability of the womb, in any given case, to bear further distention." It has its beginning "in a necessity of the uterine constitution, and not from any ascertained degree of development of the child, which, whether large or small, is most likely to be born two hundred and eighty days after the last catamenial period of the mother; but

may not be born until three hundred, or even more days have elapsed." Whatever be the secret forces on which the commencement of labor depends, and whether or not we shall ever be able to unravel them, we behold in the development of the gravid uterus and its contents, as remarked by Dr. M., "a wonderful adaptation of parts to the purposes they are destined to fulfil;" for if the child continued to grow, its expulsion, in the end, would be impossible. As now arranged, the womb, by a simple law, refuses "to yield any further than is sufficient to allow the child to acquire a certain degree of magnitude and vigor, essential for its respiratory life, but not too considerable to prevent its birth from taking place." And, as added by Dr. M., "this perhaps is, after all, a sufficient solution of the problem."

The pains of labor are owing to the sensibility, not of the expelling, but of the resisting organs—the cervix and os uteri, the vagina and external parts. Dr. M. remarks that

"The actions of the woman indicate pretty clearly, to the practised eye, the state of advancement of the process. Antecedently to the exit of the head from the os uteri, or its deep insertion into that circle, the voluntary efforts of the patient are confined to a violent grasping of things with her hands. She generally seizes the hand of a bystander, and squeezes it violently, or endeavors to twist or wring it, not pull it. Such an action always indicates a grinder, or a pain of dilatation; but when an expulsive effort takes place, she not only grasps with all her force, but she pulls at anything in her reach; so that an experienced accoucheur generally can decide, upon entering the chamber during a pain, that the dilatation is or is not completed, by observing whether the patient merely squeezes or presses the hands of her assistants, or, on the other hand, whether she pulls them with great violence."

The phenomena of a case of labor suggest to the mind

of our author "a perfect example of the state of hysteria." The process, as he expresses it, "is a pure specimen of the local action and constitutional influence displayed by the childbearing organs, and the whole of what Wigand calls the generation sphere."

The conduct of a labor forms the subject of the tenth chapter, in speaking of which our author remarks, that he "cannot well eschew to say something upon the employment of those anesthetic agents, whose recent irruption into the domain of medicine and surgery has been so sudden, violent, and overbearing." He avows that it would have been more consonant with his taste as well as with his views of medical duty, to have avoided any notice of those agents. We doubt not the subject is distasteful to him. He finds himself almost alone in his opposition to the practice, and his position cannot be otherwise than uncomfortable. The letter of his friend, Prof. Simpson, published not long since in the Medical Examiner, would disincline almost any one holding Dr. M.'s views, to the discussion of anesthesia.

It is a somewhat curious circumstance, as stated by Dr. Meigs, that in the city of Philadelphia, "the use of ether and chloroform in surgery and midwifery, has made no real progress," while the practice has become general in nearly every other great city in the United State, and in Europe. Philadelphia alone stands out against anesthesia. Whether the practitioners of that metropolis are wiser than their brethren, or only excessively cautious, is a question to be decided by a longer trial of etherization. But certain it is, that the current of professional opinion is now powerfully against them, and although it may be true that in that community "fewer women were etherized in the last than in the first six months of 1848," such cannot be said of other communities. The practice everywhere else is gaining ground, and we find the Committee on Obstetrics reporting to the Medical Association

that the question, at present, is not whether anesthetics may or may not be safely administered, but whether they *can be rightfully withheld* in the practice of midwifery.—With all the testimony of the last eighteen months before him, we are not surprised that Prof. Meigs feels some distaste to the subject. Indeed, it would be strange if he felt perfectly easy in his position. If the judgment of Prof. Simpson, which is also the conviction of a multitude of other observers, be a correct one, that chloroform and ether, while they render labor painless, also greatly increase the chances of the patient's recovery, the accoucheur who refuses to employ them is doing his patients great injustice; and the bare suspicion of such an error would create anxiety in the mind of a sensitive and humane practitioner. We do not conceive the objection a sufficient one, that anesthetics have occasionally proved seriously deleterious, even to the extent of suddenly destroying life. The same argument might be urged against all the potent articles of the materia medica. Opium, antimony, mercury, even quinine, has serious allegations to answer, and the physician who sets out resolved to employ no medicines capable of doing mischief, must discard these time-honored remedies from the roll of his therapeutic agents. But, instead of meeting, ourselves, the objections of Prof. Meigs to the use of anesthetics in midwifery, we prefer, (and we believe our readers will like our choice) giving some extracts from the masterly reply of Prof. Simpson. Prof. M. objects to anesthesia in deliveries requiring "chirurgical intervention," and especially in forceps operations, on the ground that the sensations of the patient afford us our best guide for the introduction of the instrument. To which Prof. S. replies:

"In answer to this novel objection, you will excuse me when I say it, (for I say it most conscientiously,) that I think every man who ventures to use the forceps in any

midwifery case, ought to know the anatomy of the parts implicated, a thousand fold better than you here presuppose. You would have the accoucheur guide his instrument, not so much by his own anatomical knowledge, as by the feelings and sensations of his patient. In this, as in other points, relative to any novel question in practice, we can often, it appears to me, best perceive the soundness or unsoundness of our views upon it by considering and contrasting them with our established views on other analogous questions, regarding which, the opinions of the profession have been long fixed and determined.—Now, what would the surgical world, at this time of day, think of an operator, who, in making a ligature of a large artery, such as the humeral, placed his chance of discriminating the attendant nerve from the bloodvessel which he is in search of and which he wished to tie, by appealing, not to his own anatomical knowledge, but to the feelings of his patient, as he touched the suspected structures. 'Does it hurt you, yes or no." Would our surgical brethren not denounce and decry the capabilities of any man who, in operating, should require to have recourse to such imperfect and incompetent diagnosis?—Would it be right and moral in a surgeon to deny to his patients the advantages of anesthesia, in order that their sensations and sufferings should make up for his want of anatomical and operative knowledge.

But in saying this, do not, I pray you, for one moment suppose that I fancy that the argument which you adduce, betrays any want whatever, of the highest degree of operative skill on your part. Nothing could be further from my thoughts. And, to confess the truth, I do sincerely believe, that you, yourself, while using the forceps, do not require to have recourse to any such rule as you here propound; and that in fact, the rule itself, and the objection to anesthesia in midwifery which it contains, is an *afterthought* on your part, which has only sprung up since the practice of anesthesia was proposed. For, in looking over the excellent precepts which you have given relative to the use of the forceps in the valuable work on midwifery, which you published a few years ago, (viz., the Philadelphia Practice of Midwifery,) I find no trace or mention whatever of such a rule as you have quoted above in your letter to me. If that rule really formed, as

you now state, the 'safest and most trustworthy' guide in the operation, you would certainly have at least noticed it, or alluded to it in some way. In the precepts which you laid down in your work, you would assuredly not have forgotten that one rule, which, you say, is worth a 'thousand other dogmas and precepts.' And I think it would have been only the more incumbent upon you to have mentioned it, seeing that all other authors omit the notice of it.

"I feel assured that when you come to reconsider 'dispassionately' your opinions regarding the non-employment of anesthesia in operative midwifery, you will alter those opinions. And when you come to employ anesthesia in actual practice, in cases in which the forceps are used, you will find that instead of impeding the application of the instruments, the anesthetic state very greatly facilitates it. It enables you to guide the forceps far more safely to their destination, because it enables you, without any pain to the patient, to introduce your fingers for this purpose, far more deeply between the head and maternal structures than you could do if the patient were awake and in her usual sensitive state. You, yourself, state, in your published work on midwifery, that care should be 'taken to direct the point (of the forceps) by the two fingers as far as they can reach.' (p. 300.) 'If (you again observe,) any difficulty occurs in getting the second blade forwards enough, the two left fingers that are guiding it will serve to guide it edgeways into the proper position.' Now, the state of anesthesia, I repeat, gives you (as I have several times found,) the power of fulfilling these and other important rules, to an extent that never can be attained without it, and I am sure you will find them worth any 'thousand dogmas and precepts,' derivable from the mere sensations of the patient."

Again; Prof. M. objects to the use of anesthetics in natural labors, because he holds that the pain in such labors ought not to be annulled, and that it is calculated to promote the safety of the operation—that, in other words it is "a most desirable, salutary, and conservative manifestation of life-force." To this Prof. S. replies as follows—

"In the above expressions you make no distinction between the two separate and distinct elements of which a so-called labor-pain consists, viz.: 1, the contractions of the uterus, and 2, the sensations of pain resulting from these contractions. If you apply the language I have quoted to the first of these elements, the uterine contractions, (and which contractions are not annulled by anesthetics,) I decidedly and entirely agree with you. If you apply it, however, to the sensations of pain produced by the uterine, contractions (and which sensations are annulled by anesthetics,) I most decidedly and entirely dissent from youropinion."

"The muscular contractions of the uterus form, you say, the 'essential element' of labor. In that opinion you and I are at one; and further, I quite agree, that this cannot be safely 'eschewed and obviated' in natural labor, nor are they 'eschewed and obviated' under the proper use of chloroform.

"But the pain, the second element, is a non-essential element in the process. It is non-essential, because, 1st, labor, that is, the uterine contractions, are occasionally, though very rarely in the course of practice, seen to accomplish the full expulsion of the child with little or no pain. 2d. In whole tribes of the human race, as in some of the black tribes, little or no pain seems to be endured, if we may believe various authorities; and 3d, hundreds of women have, during the last year, been delivered with perfect safety, but without any pain, while placed under the influence of anesthetic agents.

"I hold the pain to be non-essential, and I protest against the truth of your opinion that 'the pain of a natural labor is a state not by all possible means to be eschewed and obviated.' On the contrary, I maintain that we omit and forego a weighty part of our professional duties whenever we forget the axiom of Bacon, that 'it is the office of a physician, not only to restore health, but to mitigate pain and dolours.' And as medical men we are called upon to mitigate and remove those 'pangs and agonies of travail, (as you term them,) which, in degree, are, in your own language, 'absolutely indescribable, and comparable to no other pain,'—pain, for which there is 'no other name but agony.'

"In your practice, you, like other medical men, con-

stantly use measures to mitigate and relieve the pains of headache, of colic, of sciatica, of pleurodyne, of gout, of rheumatism, and all the other innumerable 'dolours' that flesh is heir to. Like other physicians, you deem it, I doubt not, your duty to wield the powers of your art, in order to free those who submit themselves to your medical care from these and other similar sufferings. But, if it is right for you to relieve and remove these pains, why is it not right for you also to relieve and remove the pains accompanying the act of parturition? I cannot see on what principle of philosophy, or morality or humanity, a physician should consider it his duty to alleviate and abolish, when possible, the many minor pains to which his patients are subject; and yet should consider it improper to alleviate and abolish, when possible, pains of so aggravated a character that, in your own language, they are 'absolutely indescribable, and comparable to no other pains,"—pains for which there is 'no other name but agony.'

"3. *You object to anesthesia in natural labor because you deem the pain of natural labor 'a physiological pain.'*

"'The sensation of pain in labor is (you observe) a physiological relation of the power or force,' and 'to be in natural labor is the culminating point of the female somatic forces.'

"Now, for the reasons that I have already stated, I entirely doubt if we should look upon the severe sensations of pain endured by our patients as truly 'physiological,' for, as I have just stated, they are not essential to the mechanism and completion of the process in the white races of mankind, and they are absent to a great degree in the black. The severity of them could, I think, be easily proved to be the result of civilization, and, as I believe, of that increased size of the infantile head which results from civilization. Parturition is always physiological in its object, but not in some of the phenomena and peculiarities which attend upon it in civilized life.

"But waiving this point or the discussion of it, let me state that even if I allowed all the intense pain of parturition to be 'physiological pains,' I cannot conceive that to be any adequate reason for our not relieving women from the endurance of them. Because nature has fashioned any particular physiological function in any particular manner, that, I opine, is no reason why the science

and art of civilized life should not, when possible, alter and amend its workings. If it were improper for us, for instance to intermeddle with the functions of the hair of the head, or of the skin generally, then all hats and other coverings for the scalp, all clothing and coverings for the body, should be at once abandoned and unconditionally condemned. If it were improper for us to alter and amend the functions of the eye, then all optical glasses, the telescope, the microscope, &c. must be thrown aside. And indeed not later than the 17th century, it was held and argued so in England. For in his history of the first beginning of the Royal Society of London, Sprat tells us that it was generally believed that this new experimental philosophy (namely the philosophical papers laid before the Society,) was subversive of the Christian faith, and many, he adds, mortally hated the newly invented glasses, the telescope and the microscope, as *atheistical inventions*, which perverted our organs of sight, and made everything appear in a new and false light, (D'Israeli.)

"You argue as if supposing that we should not use means to eschew the pain of parturition, because that pain is physiological. When Columbus first discovered your mighty American continent, a large portion of the inhabitants were unprovided with any kind of dress or covering. 'To most of them,' says Robertson, 'nature had not even suggested any idea of impropriety in being altogether uncovered." And I do think that men living in such a state could, against the fashion of dressing, use with far greater propriety and consistency than you or I, your own argument against anesthetics in labor. Chloroform and ether should not be used in labor, (you argue,) because the pain against which they protect us is natural and physiological. No kinds of clothing or dress should be used, (the original Americans might have equally argued,) because the cold and heat against which they protect us are natural and physiological.

"I have a letter lying before me on the subject of anesthetics in midwifery, by a very highly and very justly esteemed teacher of midwifery in Dublin. 'I do not (he writes,) believe that any one in Dublin has as yet used ether in midwifery—the feeling is very strong against its use in ordinary cases, and merely to avert the ordinary amount of pain which the Almighty has seen fit—and

most wisely we cannot doubt—to allot to natural labor, and in this feeling I heartily and entirely concur.'

The argument thus used, and so very well expressed by my Irish correspondent, is one which has often been adduced and repeated during the course of the past year. Some minds at first gave immense weight and importance to it. For my own part, I must confess that I never could view it as containing any great force. Look at it as applied to any other practice which happens to be sufficiently old and established: and then we will see it in its true import. Supposing, for example, it referred to the first introduction of carriages into use: It would then read thus,—I do not believe that any one in Dublin has as yet used a carriage in locomotion; the feeling is very strong against its use in ordinary progression, and merely to avert the ordinary amount of fatigue which the Almighty has seen fit—and most wisely we cannot doubt—to allot to natural walking, and in this feeling I heartily and entirely concur.

"Nay, this frequently repeated argument against new innovations becomes not only, I think, ridiculous, but really almost irreverent when we look far backwards into the march of civilization, and apply it to any practices that are so very long established as to be very antiquated and with which, therefore, the human mind has been long and intimately familiarized. Some one, but who I cannot pretend to say, no doubt first introduced the practice of wearing hats or bonnets or some covering for the head.—Suppose this practice, however, strongly resisted as doubtlessly it was at first, then the argument of my Dublin friend against this innovation would read somewhat as follows:—I do not believe that any one in Dublin has as yet used a hat to protect his head; the feeling here is very strong against its use in ordinary weather, and merely to avert the ordinary amount of wetting and cold which the Almighty has seen fit—and most wisely we cannot doubt—to allot to mankind, and in this feeling I heartily and entirely concur."

Prof. S. continues his reply in the following style—

"You maintain that 'labor is the culminating point of

the female somatic forces.' One of the most illustrious Presidents of your great American republic—Thomas Jefferson—makes in his memoir a remark of precisely the same import, regarding walking or progression. He describes the act of walking, but not exactly in the same words, as the kind of "culminating point of the human somatic forces.'

"Few or none, perhaps, will question the abstract truth of Jefferson's observations on this point. But, because walking or progression is a 'physiological' function, and the practice of it is reputed salutary, would this be with you a proper and sufficient reason for never setting aside or superseding in any way this 'physiological' state, in the same way as you insist, on the same grounds, that the physiological pain of labor should not be set aside or superseded? Because progression is a natural condition, would this be any adequate reason for your medical advisers adopting your own arguments against anesthesia in midwifery, and insisting upon this, that, the next time you travelled from your own city of Philadelphia to the cities of Baltimore or New York, you should walk the distance on foot instead of traveling it by railway or other conveyance? What opinion would you form of the judgment of any medical adviser to whom you entrusted your own health, if, on going next time to the New York or Baltimore railway station, he should gravely and solemnly repeat to you as his patient what you tell your midwifery patients, and, in your own language advise you to try to accomplish the intended journey on foot, as (to quote your own words,) 'a desirable, salutary, and conservative manifestation of life-force?' And yet this would really be nothing more than making your *argumentum ad fæminam* an *argumentum ad hominem.*

"You state, in a passage which I have already quoted, that even the agony accompanying instrumental delivery by the forceps, is a 'physiological pain.' I do not, I confess, see why the sufferings attendant on the use of the forceps, when the head is impeded by any cause of obstruction, should be regarded as a physiological pain, any more than the suffering attending the use of the catheter in obstruction from the prostate gland, or other morbid conditions of the urethra should be regarded as a 'physiological pain.' They are both operations intended to re-

move the natural contents of the respective viscera, when their operative removal becomes necessary.

But let us waive this point, and return again to the analogy between the functions of progression and parturition. Suppose that you plead with your medical advisers that, instead of insisting on your going on foot, they should allow you for once to take advantage of artificial assistance, and proceed on your journey from Philadelphia to Baltimore, or New York, by railway, because you were unable to walk the distance, in consequence of being incapacitated by a rheumatic knee, or a sprained ankle, or an inflamed or blistered toe, and they replied to you that you should not care for this, but still proceed and suffer, because the pain you might thus suffer, was (to use again your own language,) still only a 'physiological pain.' Would that argument be any adequate philosophic consolation under the endurance of your suffering? Or would you not laugh at the logic of your medical adviser, and take your seat in the railway car in spite of his doctrine? And I have a fancy, that betimes, in midwifery, patients *will* have to adopt exactly the same line of practice under the analogous circumstances, and think, and act, too, in the same way."

Our space is taken up, and we must here close, for the present, our examination of this admirable work; for admirable it is, despite the errors of doctrine and defects of style, examples of which it would not be difficult to multiply. No reader, we venture to say, will lay the volume down without admiration for the learning and talents of its author. But there is one class—a most interesting class—who, we fear, will close it with feelings of disappointment. We mean the ladies. When they, who have become familiar with the easy style of Dewees, come to turn over these pages, they will be confounded. We are not without fears that not a few readers of the other sex will occasionally find themselves embarrassed. We could wish to see the work somewhat amended in this respect. An abler volume, upon the whole, we do not hope soon to see.

SELECTIONS

FROM

AMERICAN AND FOREIGN JOURNALS.

Spina-Bifida Cured by Injections of Iodine.—An Indiana journal reports a case of spina-bifida in a young lady, aged 13 years, cured by Dr. Brainard by the use of two small iodine injections practiced at an interval of twenty-five days from each other, and followed by compression. The tumor was situated upon the sacrum, was nine inches in circumference, and three inches in height, and accompanied by paraplegia and recto-vesical incontinence. The injection, composed of one grain of iodide of potassium, half a grain of iodine, and one drachm of distilled water, was introduced by the subcutaneous method, and allowed to remain in the tumor. The reaction was considerable after the first injection, but quite moderate after the second. Compression obliterated the sac. Radical cure in two months. Amelioriation of the paraplegia. In very young children and infants a solution of half the strength of the above.—*Annales de Therapeutique* —D. W. Y.

Origin of Sugar in the Animal Economy.—The following conclusions are copied from a memoir on the above subject, by Dr. C. Bernard in the *Archives Générales de Médecine:*

1st. That in the physiological state there exists con-

stantly and normally diabetic sugar in the arterial blood, and in the liver of man and animals.

2d. That this sugar is formed in the liver, and that it is independent of a sugar or starch alimentation.

3d. That the formation of sugar in the liver begins before the animal is born.

4th. That it appears connected with the integrity of the pneumogastric nerves.—D. W. Y.

Uses of the Pancreatic Juice in Digestion.— Dr. Bernard lately read before the Academy of Sciences, a memoir on the uses of the pancreatic juice in digestion. The object of the author is to demonstrate experimentally that the pancreatic juice is destined, to the exclusion of all the other intestinal liquids, to modify in a special manner, or in other words, to digest, the neutral fats contained in the aliments, and thus allow their ulterior absorption by the chyliferous vessels. It results from experiments performed by Dr. Bernard to ascertain the physiological properties of the pancreatic juice within and without the living body:

1st. That the pancreatic juice possesses the property of emulsionizing instantly and completely the neutral fats, and afterwards of acidifying them and separating them into fatty acid and glycerine. The pancreatic juice alone of all the liquids of the economy enjoys this property.

2d. That the pancreatic juice in emulsionizing and in modifying the fatty matters renders them absorbable and in this way becomes the indispensable and only agent of the formation of chyle.—*Gazette Médicale.*—D.W.Y.

On the Treatment of Internal Strangulation of the Intestines by Strychnine.—Dr. Homolle relates three cases in which he found very minute doses of strychnine (one millegramme) repeated every hour completely efficacious, after various other means had been tried in vain in relieving urgent symptoms of internal strangulation, produced in two of the cases by the return of the hernia *en masse*, and in the other by violent vomiting. It was the

knowledge he had of the favorable influence which strychnine exerts upon the peristaltic action of the bowels, in constipation from cerebral paralysis, hypochondriasm, etc., that induced him to employ it in the present cases. The borborygmi, the painless sense of vermicular movement, the rapid cessation of the pain and vomiting, and the expulsion, first of gas and then of feces, which resulted from its employment, confirmed the anticipation he had entertained. M. Amussat, who employs the conjoined force of two or more persons for the reduction of hernia, believes that in this way nine-tenths may be reduced; but the taxis is, in point of fact, but the substitution of an external constricting force for the insufficient contraction of the walls of the intestine. The alkaloid by increasing defective, or by correcting irregular peristaltic action, diminishes the volume of the intestine, and expels the retained fecal matters, or removes invaginations. It is to be recollected that the obstacle in strangulation of the intestine is hardly ever materially insurmountable. So that this means may sometimes associated with the taxis, even in strangulated hernia, prevent the necessity of resorting to an operation.—*L' Union Médicale.—British and Foreign Medico-Chirurgical Review.*

The Heart-Clot—its Cause. By CHARLES D. MEIGS, M.D., Professor of Obstetrics in the Jefferson Medical College, Philadelphia.

I beg leave, through the columns of your useful periodical, to present the statement of certain opinions I have long entertained, relative to points in pathogeny connected with the occurrence of endo-cardial coagula; and I do so because I consider them deserving of serious consideration by the practitioner.

These opinions are connected with certain points of practice or treatment that are, in many cases, indispensably necessary for the safety of the sick; and my sole desire in offering the communication, is founded on the hope that it may tend to prevent some disastrous events, which the want of a little reflection might allow.

I believe it is a fact, not to be controverted, that in an animal slowly bled to death, the first portions of blood extravasated, coagulate less readily than the last portions. If this doctrine is true, it follows that the coagulability of the blood left in the vessels after great hemorrhages is augmented: I have had several occasions to find that it is dangerously augmented.

To take one of the most ordinary cases of hemorrhage —I mean that occurring after labor, or in abortion—we have an instance in which, even after the arrest of the bleeding, the patient is exposed to mishap from the coagulability of the blood remaining in the vessels. Loss of blood produces a tendency to fainting, or lipothymia: during an attack of fainting, the motions of the heart are enfeebled, the diastole slow—torpid, for the blood moves languidly in both the vena cava, pours itself out in a slow current into the auricle, which it sluggishly distends, and sometimes is then instantly converted into a solid clot. If a clot be formed in the right auricle, it will also be formed in the *iter ad ventriculum dextrum* filling up the cone of the tricuspid valve; and the nucleus of it will cause the coagulum at length to occupy the cavity of the right ventricle, and extend itself to a greater or less distance along the tractus of the pulmonary artery. If the whole pulmonic side of the heart should be perfectly occupied in this way, the death of the individual would be instantaneous; and I doubt not, that many of the examples of sudden death, after delivery in hemorrhagic labors, are produced by the formation of cardio-morphous coagula which form in the instant of a state of fainting, or lipothymia. It is understood that the young Princess Charlotte, whose death at Clermont cast a mournful gloom over the whole British Empire, died within fifteen minutes after the birth of the princess, and that there was no very considerable hemorrhage, no laceration, nor other incident that might fitly explain the suddenness of her decease. Many women are known to perish in this manner. I have been the eye-witness of instances of the kind. I have also seen a very great number of persons, who appeared to me to be in danger of perishing in the same way, but who escaped a fate so deplorable. I am aware also of istances in which women, after considerable hemorrhagic

losses, have been esteemed by their physicians to be what is called doing well, during a space of from one to seven days, but who afterwards becoming *instantly* extremely ill, have perished without remedy in from two to twenty days thereafter.

If a surgeon, desirous to reduce a luxated humerus, should attempt to do so, he might find the resistance of the muscular contraction so great as to prevent his success, and he would therefore probably resolve to take away the resistance of the muscular contraction, by bleeding his patient *ad deliquium*. The surgeon knows that the deliquium would take effect upon the loss of a much smaller quantity of blood if the patient should be placed upon his feet in a standing posture, than if he were to recline upon his bed in a low recumbency. He would bleed the man while in an erect position. This ordinary practice is conformable with the dictates of experience in all cases of fainting, for it is well known that an individual will faint more readily in a vertical, than in a horizontal position; and the first idea that is obvious to any medical man in a case of fainting is this —that he shall cause the patient to be laid with the head very low, taking away for the time even the pillow. I have, on many occasions, besides taking away the pillow, found myself under the necessity of elevating the foot of the bed by placing books or blocks under the lower bed-posts in order to favor the determination of blood to the encephalon; for I conceive that in all cases of fainting the brain has become oligemic.

I may assert the opinion here, that fainting is oligemia of the encephalon, and that a hyperemia of the encephalic bulbs is the very converse of, and absolutely incompatible with the state of swooning. To raise up a woman who has within the few days past lost a considerable quantity of blood is almost inevitably to bring on deliquium. Now, if the idea be just that hemorrhage renders the remaining blood more coagulable, then it follows, that to take the woman out of bed, or to let her sit up in bed, is to expose her to the hazard of forming a coagulum in the right auricle, which, by extension of the nucleus, may fill the ventricle, occupy the aperture of the tricuspid, and pass several inches upwards in the course

of the pulmonary artery and its branches. Monthly nurses, and the ordinary attendants of the sick know nothing of these things, and they hesitate not oft-times, to exhort or to permit the anemical accouchée to rise and sit for a few moments for purposes that might be answered without quitting the horizontal position.

A lady was taken in labor in the afternoon. She sat in her arm chair all night without sleeping: at 5 o'clock in the morning she placed herself upon the bed and the child was born in half an hour. The placenta was spontaneously and perfectly extruded, nothing being left in the womb: it was her fifth labor. Within an hour she had hemorrhage—the vagina and uterus contained large coagula which were turned out by the physician, whereupon the hemorrhage ceased; she may have lost altogether some thirty ounces of blood. He remained near her for several hours. At mid-day, throughout the afternoon, and during the following night, she appeared to be perfectly well. At half past nine the following morning the physician made his visit; she was without pain or the least indisposition, nor had she any symptoms, save those that appertain to the condition of a healthy accouchée. Her pulse was about 75 beats per minute; the respiration, temperature, and hue, satisfactory to the medical attendant; her complacency, physical and moral, was absolute.

The physician left her at 10 o'clock in the morning. Being summoned again, he reached her apartment at 1, P.M., and found her in a state, which led him to suppose that she might be near dying. The pulse was 164 per minute, very feeble, and thread-like; the hands were cold, and the respiration was performed apparently by the strong effort of her will only. The respiratory acts were performed with great violence, and without rythm. Auscultation of the heart disclosed a feeble impulse, with great irregularity of the systolic action. She had lost no more blood beyond the ordinary lochial discharge; the vagina, which was examined, contained no coagulum.

When I came into the apartment at 3 o'clock, P.M., she supposed herself to be in a dying state and asked me if I thought she would live half an hour. It is difficult to conceive of a spectacle of more extreme physi-

cal distress than that presented by this dying lady. Every respirtory act was attended with violent pain referred to a place near the lower extremity of the sternum, as in angina pectoris. Palpation of the abdomen and questions relative thereto, showed nothing abnormal there. Upon retiring for consultation, I expressed to my medical brother the opinion that the pulmonary heart was filled with a coagulum or false polypus; the prognostic therefore, was necessarily fatal.

She had been left at 10 o'clock in the morning with a pulse at 75, and in the course of the forenoon she had been taken up from her recumbent position, and allowed to sit upon the close-stool for the purpose of evacuating the bladder of urine, immediately after which she was ill, and the physician sent for.

I made this diagnostic upon these grounds, viz: I said there is no pathogenical principle that I know of that can explain the change of her pulse from 75 to 164, in so short a time, save that of a mechanical obstruction formed by a clot or tampon filling up the cavities of the heart. It is clear that there is no scarlatina, no variola, no fever of any kind—no attack of Asiatic cholera nor other malady, that is capable of making, so soon, so great a change in the action of the heart as is here observed. The patient had hemorrhage yesterday, which has increased the coagulability of her blood; she was taken out of her recumbent position and placed upright in bed, whereupon she became suddenly ill in consequence of the coagulation of blood in her auricle, and there is no power that is able to remove this tampon from the cavity of her heart; it will destroy her as effectually as would a musket-ball deposited in the ventricle.

The respiration in this case was carried on at the time of my arrival, solely by the force of the voluntary power. There seemed to be no rythmical respiration whatever; when she ceased to breathe by her volition, her respiration appeared to be suspended altogether. As might be expected, these voluntary aspirations were not rythmical, but interrupted, uncertain, having long intervals. The blood that came up from the inferior cava and down from the upper cava, must have passed with great difficulty between the superficies of the clot, and the paries

of the heart. It must have moved in small quantities only through the tricuspid, and when distending the pulmonary ventricle, that ventricle could contain but a small portion of fluid blood, being mainly occupied by the coagulum. A similar difficulty existed as to the efflux of the blood along the pulmonary artery, which was tamponed at the time with a cylindrical clot extending several inches along the vessel and its principal branches. Under these circumstances, the quantity of carboniferous blood entering the lungs by the the pulmonary artery, for aeration, could be a small quantity only; hence the violent almost spasmodic protracted efforts to aspire the air of the atmosphere; efforts which, however great, must measurably fail of the purpose of abolishing the direful sense of pulmonary oppression, or respiratory distress, or to use a more concise term, asphyxiation. The quantity of blood in the lungs was too small to receive the endowment of oxygen which is requisite to preserve any individual from a feeling of suffocation; and however thorough might have been the aeration of the small quantity that was there, however brilliant and florid may have been its arterial hue after being breathed upon, the quantity of oxygen imparted to it must necessarily be insufficient so to act upon the nervous mass, the neurine, as to hinder the conscious principle from perceiving the sense of asphyxiation. With a heart situated in this manner—with the utter impossibility of thoroughly oxygenating the sanguine mass, the innervation gradually fails—a failure which is manifested in the decadence and ultimate overthrow of the various functions. All the functions are but the expressions of the biotic force that is sent down by the encephalic bulbs and spinal cord of the distal points of the nerve-fibrils in the organs. Every acinus of a gland is alive solely by the nervous force which comes into it by the fibril that connects it with the nervous mass, to obey whose mandate is to live, while to fail of receiving it is command to die; the same is true of every part and particle of the histological constitution.

As the encephalic bulbs certainly cease to irradiate the organs when they themselves cease to receive through the

oxygeniferous streams injected into them by the carotids and vertebrals, the supplies of oxygen which alone enable them to evolve the life force, the nerve force, the *lebenskraft*, the biotic force—it follows, that the organs die in the same ratio as those bulbs fail and perish.

One is not surprised, therefore, upon observing that a person in good health, like this unfortunate lady, the right side of whose heart becomes suddenly, instantaneously tamponed by a coagulum, should fall a victim, and that speedily, not to the presence of the clot alone, but to disease developed in other parts, whose life is overthrown in consequence of the obstruction of the prime organ of circulation. Only a few hours could pass with a large coagulum in the heart, before the pericardium would begin to be filled with serum, or the embarrassments in the pulmonary circulation seek in vain for relief, by pouring out a vast effusion of water into the cavities of the pleura; or the innervative force being withdrawn from the viscera contained within the abdomen, whose venous blood is prevented from flowing off through the pulmonary artery, there is set in motion in the peritoneal sac, a tide of effusion filling it up in the course of a few hours.

In all such cases as those of which I am speaking, the escape of the blood from the venous side of the sanguine circle is retarded, with the effect of producing enormous engorgements of all those venous branches, which usually and readily allow their products to run off through the ascending and descending cava. Let the reader perpend for a moment the condition of that portion of the vascular system which receives aortic injections by the celiac and the superior and inferior mesenteric arteries: let him reflect that the whole of this torrent, which is entirely expended upon the chylopoietic and alimentary organs, is first collected by the capillary radicles of the portal vein, then distributed again among the capillary termini of the hepatic porta, whence it is a second time collected to flow off by the hepatic veins. Now, if the auricle and ventricle are tamponed by an endo-cardial coagulum, this whole torrent is inevitably arrested, and the cavities become immediately engorged by the continued injections from the aorta, leaving no grounds of astonishment as to the sudden or fatal derangement of

the healthy states of the tissues that are developed by it.

The time required for extinguishing the life of the sufferer is a variable time; one relative to the magnitude and extent of the coagulation. I can imagine that in the case of the Princess Charlotte, already alluded to, a coagulum was formed which filled the heart so completely, as to put an end to its action within fifteen minutes after the birth of the princess. My patient, above mentioned, lived forty-eight hours after the occurrence of the accident, during which time she suffered the most inexpressible respiratory distress. She filled her pericardium with serum, while her peritoneal cavity became also the subject of a great effusion. Upon examining the heart twenty-four hours after her decease, one might feel surprised that her life could be so long protracted, since the auricle, tricuspid, and ventricle were completely tamponed with a clot which was not an enthanasial clot, but consisted apparently of a firm, whitish yellow mass of fibrin, out of which every particle of hematoglobulin had been washed away, or expressed. An enthanasial clot is, in my opinion, necessarily a red one; a prëenthanasial one ought to be white.

A patient in this city was delivered early in the morning. Soon after the birth of the child and the delivery of the placenta, the physician descended to the breakfast room, having given strict charge that the patient should preserve the recumbent position and be kept quiet. While at his breakfast, cries from the top of the stairway called him, for "God's sake," to hasten to the assistance of the patient. In a moment he was at her bedside, where he found her already dead, having fallen backwards across the bed, with her legs hanging over its side. He was told that she had said to her nurse, "I wish to get up,"—"The Doctor says, madame, you must not get up, if you please." "But I must get up, I will get up." She threw her feet out of the bed, and rose up sitting upon its edge; her head reeled to and fro, and she fell back and expired. No examination was made of the dead body, but I ask the reader to explain the cause of this sudden death, otherwise than by the rationale that her heart ceased to beat because it became instantly filled with an immovable clot.

Man cannot die, save by the cessation of the activity in the brain, or in the heart, or in the lungs: he lives within this triangle, and can only escape at one of its angles. He must die by the brain, or by the heart, or by the lungs. It is to the last degree improbable that this woman perished solely because her brain ceased to evolve; but if it did not instantly cease to evolve, it must have continued to be the cause of motion everywhere. If the heart, as I suppose, became instantly filled with congealed blood, so that it could no longer receive nor discharge any portion of that fluid, the nervous mass would cease to live as soon as it should have consumed all the oxygen contained within its capillary vessels at the moment of the arrest of the cardiac circulation. The patient died by the heart.

A lady was confined in a natural labor, giving birth to a healthy child, at term. She lost a considerable quantity of blood at the time of the extrusion of the placenta, which left her feeble and pale. Her physician directed her to be kept quiet. She had a good day, and following night. At the morning visit the physician found her comfortable, and her condition was satisfactory to him. Soon after he left her apartment she was seized with violent alarming illness, whereupon he was recalled, and was again present after the lapse of about an hour. Her pulse was extremely frequent, feeble, and small; it continued frequent until the moment of her death, which took place about the nineteenth or twentieth day. On the eighteenth day, I think, I saw the lady, and formed the opinion that she was perishing on account of a false polypus, clot, or tampon in the heart, established there by the imprudent early uprising after a hemorrhage. After her death a great quantity of water was found in the cavity of the right pleura, while a firm white coagulum, entirely destitute of corpuscles, was detected in the right auricle, filling up very much the cone of the tricuspid, while the ventricular end of it seemed to be torn or threshed to pieces by the cordæ tendineæ, which, during so many days, had been vainly occupied in the endeavor to demolish it. The filling up of the pleura with serum was a natural consequence of the condition of the respiratory organs, quite as much so

but not at all more so, than was the filling up of the peritoneum and pericardium in the former case, consequences of the arrest of the circulation in the cava and its branches.

Towards the end of the year 1848, a primapara gave birth to her first child. She was tall, very slender, and delicate; the placenta was not removed; she lost a good deal of blood. Between forty and fifty hours after the birth of the child, upon being called to her succor, I removed the placenta from the cervix uteri in which it was grasped and detained. I removed it with the index finger of my right hand. The stench of it was noisome to the last degree. The putrid odor of it remained upon my hand for twenty-four hours, notwithstanding every effort to remove it. The patient was pale, and her pulse somewhat frequent, presenting the usual characteristics of the anemical pulse. On the following day she was comfortable; the milk was secreted, the lochia healthy, and she was doing well, though still very pale. On the seventh day, she was placed in a chair before the fire, sitting up: she immediately felt sick, was put to bed, and I being called to see her, told her friends that she had formed a fatal coagulum in the heart. She lived about forty-eight hours after the accident; I did not examine her body. I leave the reader to judge whether my diagnostic was or was not probably correct. She had a pulse upwards of one hundred and sixty; the impulse of the heart feeble; the respiration disturbed, frequent.

On a great many occasions since I have been a practitioner of medicine, I have been called to see patients, who, after hemorrhagic labors, have disobeyed my injunctions as to horizontal rest, and who being prematurely lifted upright in bed, had fainted. I have not a doubt that among those of these persons in whom I found the heart fluttering, irregular, and feeble in its action on my arrival, incipient coagulation existed. I have thought as I entered the room of a patient, that her auricular blood had begun to thicken, but was driven out from the auricle before its thorough coagulation, in consequence of the startling effects of a dash of cold water upon the face, or of clapping the hands, or snatch-

ing the pillow from under the head and shoulders, allowing the head to fall so as to favor the restoration of its vascular tension or even hyperæmia, and thereby re-establishing the perfect and powerful extrication of its innervative force. The re-excitation of the innervative force of the brain would probably soon enable a heart so situated to discharge itself of the inchoate coagulum.

It is not needful that I should draw out this paper to any great length; nor that I should discuss the reasons why so many autopsies present the evidences of the endo-cardial clot of which I have spoken, without having excited in the mind of the attendant practitioner, the suspicion of its presence before the death of the patient. It appears to me, to be enough for the present occasion, to propound the question, Can a patient with a white clot in the auricle and ventricle recover? If such a clot be a small one, the pulmonary circulation, although checked, is not necessarily suspended, but the nucleus of such a clot, like the nucleus of an urinary calculus, tends constantly to increase in size, and hence a small coagulum, which strangely disturbs the action of the heart, may consist with a considerable protraction of the struggle against its fatal power over the circulation. The gradual augmentation of the volume of the clot, and its extension into the pulmonary artery and its branches must in every case lead to an inevitable dissolution. I have not the least confidence in the power of alkaline medicines to dissolve such coagula, nor do I admit that the dull white endo-cardial coagulum so often discovered is the result of a state of endo-carditis; but I rather attribute its occurrence to a temporary stasis or near approximation to stasis during a state of fainting in an exhausted patient. Its occurrence after hemorrhagic labors, or upon the almost total suspension of the circulation at the cessation of an attack of puerperal eclampsia ought not to excite surprise. If a coagulum should fill the auricle and the tricuspid valve completely and at once, the death would be almost instantaneous and the clot would be found red. If the process of its formation should be long protracted it would be dull white.

I did not design in this paper, to speak at all of the enthanasial coagulum; it is perhaps quite normal that some

portions of the blood last reaching the heart, at the moment of death, should congeal there.

In regard to the diagnosis of cases in which the endocardial coagulum becomes suddenly constituted, as in the examples of which I have spoken, it appears to me that the medical observer, in order to make it, must resort to a method which is only to be fitly characterized as transcendental diagnosis. It is true that the feeble impulse and almost complete suspension of the sounds of the heart, might serve as a quasi physical diagnosis of however little value.

By transcendental diagnosis I mean one made by a process of the mind, fitter to be called sentiment or conviction, than a regular ratiocinative progress.

To enter an apartment one has quitted only half an hour before, and to find a patient hopelessly ill with signs of imminent death, yet who had no serious symptoms of illness before—to find her making desperate voluntary efforts to breathe, without any signs of laryngeal or phrenic or pulmonic inflammation or accident—to see the face pale and ghastly—to observe her conscious sense of impending asphyxiation from loss of oxygen—without the leaden or iodic hue of a general cyanosis—These are the grounds of a diagnosis which may be called transcendental, one in which the consciousness of the physician informs him that a mechanical obstruction with n the heart exists, and that such an obstruction alone can give rise to the phenomena.

In all the lingering or sudden progressions of the accidental disorders supervening in endo-cardial coagulum, no purely cyanotic manifestations have met my observation.

Writers on cyanosis mostly refer the cyanotic symptoms to the backing of the carboniferous blood of the veins into the capillaries. You, Messrs. Editors, are aware that I have maintained the opinion that cyanosis is, in its essence, not blueness of the surface, but a state of the nervous mass produced by the absence of oxygen in the brain-capillaries.

The writers, and among them, perhaps in chief, Professor Rokitansky in his Pathologischen Anatomie, contend that cyanosis depends most commonly upon constric-

tion of the orifices of the great vessels of the heart, preventing the venous blood from escaping from the cavæ by the routes of the heart. Now, I aver that no obstructions existing in the vessels of the heart can be more complete than that depending upon a large endo-cardial clot, or tampon; and yet I venture to say that under circumstances of such kind the victim perishes without manifesting the peculiar livor or cyanotic tinge which characterizes the forms of the malady, that are connected with open foramen ovale and imperfect action of Botalli's valve. It is my clear conviction, that as long as the respiration can be carried on in endo-cardial clot, the blood, however small in quantity that reaches the lung passing along the superficies of the clot, is highly charged with oxygen. While, therefore, oxygeniferous blood continues to reach the brain, the patient, though conscious of the want of oxygen in due quantity, is in a state different from that of one who injects only carboniferous or venous blood into the neurine of the encephalon.

My intention was to speak only of the white clot, the false polypus, to show the probability of its being formed under circumstances of deliquium, in the oligæmia that follows uterine hemorrhage; and thereupon show how dutiful a thing it is on the part of the attendant physician, to issue the clearest and most precise orders as to the guidance of the hemorrhagic accouchée. I believe that a woman who has lost a very great quantity of blood, and who is prematurely taken out of her recumbent decubitus, and placed upright upon the close-stool, whether in bed or not, incurs a most dangerous risk of a miserable and premature death, from the sudden formation of a heart-clot.—*Medical Examiner.*

On Prolapsus Uteri. By Professor Hohl.—Professor Hohl believes that some very erroneous notions prevail as to the *causes* of this occurrence, and that some light may be thrown upon the subject by considering the changes of position which the uterus normally undergoes at different periods of life. In the mature fetus the uterus projects considerably beyond the pelvis; and it is only when it has acquired its completed shape and size at pub-

erty, that it is found entirely within the cavity. At the commencement of the menstrual cycle it retains its position, or even rises still higher in the pelvis, while at the termination of this it again sinks, with the loss of blood, in stout young women. In women who seldom or never bear children it sinks still deeper, as it does, too, after the menstrual functions have ceased. In pregnancy the organ rises remarkably, and M. Hohl denies the correctness of the statement that it sinks lower in the pelvis after the second month, the apparent sinking being due to the turgescence of the organ, and especially of its cervix. After delivery the uterus remains high up in the abdomen, and only gradually resumes its ordinary position. In old women it is found deep in the pelvis.

The production of prolapsus is not dependent upon the condition of the vagina, and the ligaments of the uterus. The vital power of the organ may be said to maintain it in position. When this is augmented the uterus is raised, while, when it is diminished or lost, it descends.—Other organs, and indeed the whole body, in like manner exhibit strength and power proportionate to their *turgor vitalis*. The increase of the vital activity of the uterus during its development and growth, as also during menstruation and in pregnancy, is attended with elevation of the organ, which sinks again when these conditions prevail no longer. So far from allowing that the prolapse results from defective supporting power of the vagina, we may rather regard the uterus as supporting the vagina, and prolapsus of the latter may occur without any prolapsus uteri.

Thus the author refers the production of prolapsus to a preceding or coexisting condition of health, giving rise to a diminished vitality. This explains why we so seldom meet with the disease in young healthy women; while we know that whatever favors the relaxation of the genital system, and lowers the tone of the fibre, acts predisposingly,—the germ of the evil being found in the puerperal condition, when the uterus, after having been high up in the abdomen, sinks down into the lesser pelvis.

Although prolapsus may be secondarily produced by other affections, as tumors of the belly, prolapsus vaginæ, cystocele, &c. &c., yet far more frequently a change in the direction, rather than in the position of the organ

then takes place; and even while the portion of the rectum in connexion with its posterior wall may prolapse entirely, the uterus may retain its normal position.

There may be a diseased condition of the economy in general, or of the uterus in particular, upon which depends this extinction or diminution of its vital power; and accordingly as this is or is not curable, will depend whether a cure of a prolapsus is apparant or real; as mere reposition with mechanical support is not a cure. In some diseases which are attended with an increased activity of the uterus, there is a rising of the organ in the pelvis, as puerperal fever, hydrometra, &c. Disease of the ovaries does not produce any sinking of the organ; nor do tumors or indurations of its substance as long as they are in process of development, nor until they have interrupted its functions, or weighed it down by their great bulk. Polypi also seldom give rise to prolapsus.

Treatment.—Common as is the disease, a radical cure is seldom accomplished. The indications are to remedy the defective or disordered condition of the general vital powers, or of those of the uterus in particular. The author especially warns us against the continued use of injections, and the too early employment of pessaries.—When the vital power of the sexual system or uterus is exhausted in consequence of age, over-stimulus, or incurable disease, mere palliative treatment should be employed.—*Zeitschrift für Geburtskunde.—Medico-Chirurg. Review.*

On the Treatment of Chronic Inflammation of the Bladder by Injections of Nitrate of Silver.—By R. L. McDonnell, Esq., M. D.

In a paper, published in the Third Volume of this Journal, I drew the attention of surgeons, to the great utility of *Injections of nitrate of silver into the bladder, in chronic inflammation of that organ;* and, in support of my views, I adduced some remarkable instances of their successful employment, which had occurred both in my private and hospital practice. It is with the hope of placing this method of treating a disease, hitherto considered incurable, which one of the most eminent surgeons in the

world—Sir Benjamin Brodie—considers the "opprobium of Surgery," and says, "there is no disease for which an improved method of treatment is more wanted," in that position in surgery, which, I feel convinced, it deserves to occupy, that I have laid the following cases before the profession.

Since my first paper was published, I have cured a great number of persons affected with this disease, but I have selected the following cases from amongst them, because, in them, the cure was *solely effected by the injections* —whereas, in some of the others, general treatment was likewise employed; and, in some, the affection of the bladder, was complicated with organic change of the prostate gland, with strictures of the utethra, and, in one instance, with urinary fistula and strictures—complications requiring special treatment, and which, some might suppose, assisted in relieving the affection of the bladder; although I am quite satisfied, the cures of the vesical inflammation, were due to the injections alone. I have also omitted some mild cases of the disease, because, as stated in my former paper, they might have been cured by remedies, generally known to surgeons, and, therefore, are not so valuable, as evidence in favor of the method by injections. But, my principal reason for selecting the following examples is, that we have in them, unquestionable testimony of the utility of the practice I advocate—for, in all, general treatment and the usual remedies *had been carefully and perseveringly employed, without success; and in one, the age of the patient, and the duration of the disease, were most unfavorable for testing the merits of the treatment, yet in all, the cure was complete and permanent.*

[Here follows a detail of the treatment referred to, but we have not thought it necessary to copy it.]

The following is Dr. M.'s directions for injecting the bladder.

The patient being placed either in the erect position or on a sofa, a gum-elastic catheter, about the size of No. 9 or 10 (Wiess,) is introduced, and water at the temperature of 98° Fahrenheit, is injected through this into the bladder, by means of a caoutchouc bag, or, what I prefer, a syringe, with a "three-way valve," by which the fluid can be drawn back from the cavity if necessary.—

After the bladder has been completely cleansed of any fetid urine and mucus which may be contained in it, the solution of the caustic, being heated to the same degree, is to be introduced in a similar manner, and allowed to remain there for about one minute, care being taken, by compressing the urethra, to prevent its being forcibly ejected by the violent straining that is certain to be induced. The quantity of water or solution should never exceed four ounces, for though the bladder in its healthy state is capable of containing nearly a pint and a half of urine, without being over-distended, yet as the quantity it is capable of retaining in severe chronic inflammation seldom exceeds a few tablespoonsful, the bladder accommodates itself to its diminished contents, and gradually becomes smaller, and consequently a large injection would act injuriously in two ways—by over-distending the organ or by passing up into the ureters. In fact, we find it unnecessary to use a larger quantity of the solution than I have mentioned, for it requires some address to introduce even that amount without resorting to force. The patient is then ordered a warm bath, and should the urine become bloody or mixed with shreddy concretions, he should use frequent fomentations and anodynes. But these symptoms seldom last for more than a few hours, and our patient should always be informed that such consequences are likely to be the immediate effects of the operation.

The strength of the injection has seldom to be increased beyond five grains to the ounce, although in one instance, that of an old gentleman, aged seventy-two, I had to increase the strength *gradually* to ten grains to the ounce before a satisfactory effect was produced. It is, however, always better to commence with a weak solution, which may be made stronger, according to the circumstances of each case, and the judgment of the practitioner. Some of my patients have hesitated about undergoing treatment by injections, in consequence of their advanced age, but though the disease is not in such cases so easily cured, as in the young subject, it is still, in the great majority of instances remediable by the same means as was proved by the great relief obtained by a patient aged *seventy-six*, who was under my care in the Montreal General Hospital, within the last month, into whose blad-

der I injected, on two occasions, a solution of nitrate of silver, two grains to the ounce. He left the Hospital of his own accord, May 23, quite free from his former complaint.

The Surgeon should, in fact, show his patient that all general treatment and local remedies having failed, he has only two alternatives to choose between—a life of misery and suffering, a burthen to himself, and incapable for the enjoyment of society, or the performance of business—and submission to a plan of treatment, which has been eminently successful in cases equally protracted and aggravated as his own, and in patients equally old and infirm, and who like him had spent time and money, and exhausted their patience, in ineffectual efforts to get rid of a disease so formidable, so excruciating, and so disgusting to themselves and others, as Chronic Inflammation of the Bladder.—*British Am. Med. Jour. Phys. Sci.*

Observations on a mode of Annihilating the pains which follow Surgical Operations. By JULES ROUX. (Commissioners, Flourens, Roux, Velpeau.) Translated by James Bryan, M. D., Professor of Surgery in Geneva Medical College.—The pains produced by Surgical operations may be divided into three classes: 1st. The pains of the operation: 2d. Those which immediately follow the operation: 3rd. Consecutive pains, or those which take place during the stage of cicatrization. Distinct in their causes, their intensity, their duration, and the time they continue, these pains do not differ in the mode by which they are relieved. This mode, which completes the American discovery, I have found, if I mistake not, in *direct etherization*, to the wounded surfaces.

Local and direct etherization, which does not appear to differ from indirect and general, except that the blood is not the medium of communication or which employed, consists in placing an anesthetic fluid for five, ten or fifteen minutes in contact with the wound. This application is made by means of a pencil, a pledget of charpie, a spunge, a sack containing ether, if the fluid is employed in the state of vapor, or, what is preferable, by moistening the wound, or filling it with the anesthetic agent. To

the present time my attention has been directed only to the aldehyde, the ether, and the cloroform, the latter particularly was used in nearly all the cases referred to in these remarks.

In the first series of experiments, I subjected to direct etherization small recent wounds, as well as the more considerable ones, the operations for phymosis, amputations of the fingers, the leg, and the fore-arm, and have made the following observations:

Where the patients have not been previously subjected to the influence of ether through the lungs, they experience a sensation of pricking, smarting, of heat, of sharp pain, and even of burning. After a few moments these phenomena diminish, rapidly disappear, and give place to partial etherization, limited to the parts directly etherized: local insensibility for forty-eight hours at least, keeps the patients in the most complete comfort.

When, on the other hand, the patients have undergone etherization, and, before returning to general sensibility, the wounds are exposed to the local influence of ether, the pains from the immediate action of the anesthetic agent are not experienced, and the patient, entirely composed, passes through the first two or three days after an operation, without pain.

Local anesthesia produced by direct etherization continues, thus, long enough to annihilate the pains of the second class. I proceed, in support of this assertion, to state the last case of amputation which I have subjected to direct etherization.

On the 8th of November, 1848, I performed on F. Vaslot, aged thirty years, an amputation of the fore-arm. After the separation of the limb, and the application of four ligatures, the stump was washed with chloroform, while general etherization with chloroform was produced. The stump, without dressing even, was placed (as is done by Sedellot) on a cushion, and covered with a piece of linen.

During two days Vaslot declared he did not experience the least pain in the wound, after which, at intervals, he began to experience it very slightly. Although the patient had been affected both in the right eye and the fore-arm of the same side, he had no fever, slept well, the appetite good, and the progress of the wound regular. At

this time, eleven days since the operation, cicatrization, already accomplished on the margins of the wound, is almost finished.

The fact of the local insensibility of traumatic surfaces, without shock, or general insensibility, with the fact that the system is freed from pain during the first days after the great operations, and that this condition continues up to the moment when cicatrization commences, appear to me to be of sufficient importance to engage the attention of Surgeons in the matter.

In a second series of experiments, I tried to annihilate pains of the third class, or those which may occur during the restoration of the tissues. I have often accomplished this by direct etherization.

I think I have observed, with many other Surgeons, that, after general etherization, the second order of pains have less intensity, and a shorter duration than when we have neglected to apply the powerful means of anesthesia. I have remarked, also, that after direct etherization, the pains of the third class are considerably ameliorated. They were nothing in the patient who had suffered a partial amputation of the finger: and nearly nothing, or so light in the cases of amputation of the leg and fore-arm, that I did not think it worth while to apply consecutive anesthesia.

On the other hand the pains of suppurating wounds may be calmed, and even annihilated by the local application of chloroform, and the application, far from injuring these surfaces, appears, on the contrary, to exert a happy influence upon them. I have frequently shown to the Surgeons of the Marine, attached to the service of which I have charge, inguinal ulcerations, following syphilitic eruptions, insensible to the nitrate of silver, when its application before direct etherization, induced severe pains for several hours. These facts go to show, that etherization will overcome the pains of the third class, in traumatic surfaces, while its action is less certain than in the preceding cases.

In the course of my labors, I have not observed, without astonishment, that chloroform, which so painfully reddens the skin, with or without the cuticle, without completely deadening sensibility, produces, on the contrary, on traumatic surfaces, with an evanescent irrita-

tion, complete insensibility. The reason for this difference is entirely anatomical.

Direct etherization, for which I prefer the liquid chloroform to that in vapor, is remarkable for its harmlessness; I have never regretted having recourse to it. In no case, even when I have injected sixteen grammes of chloroform into the tunica vaginalis of a patient affected with hydrocele, have I observed appreciable phenomena, which could be attributed to the absorption of the fluid. I have always been struck with the calmness of the patients, the absence of febrile action, and with the simplicity and regularity of the progress of suppurating wounds.

If the benefits of local anesthesia, which a few facts alone have confirmed, should receive the sanction of experience, we may hope that direct etherization will comprehend in its application, all the conditions of traumatic wounds.

The statistics of amputations performed with the aid of etherization, have, by a great number of cures, shown all the advantages which may be obtained by anesthesia, in the great operations of surgery. May we not, hence, infer, that direct etherization to traumatic surfaces will add something more to these happy results?—*Buffalo Med. Journal.*

On Cod Liver Oil in Phthisis.—By Dr. C. J. B. Williams.—Dr. Williams has retained notes of 234 cases of phthisis in which he has given cod liver oil. In 9 cases the oil disagreed, and was discontinued; in 19, although taken, it appeared to do no good, whilst in 206, out of 234, its use was followed by marked improvement, varying in degree from temporary retardation of the progress of the disease, and a mitigation of distressing symptoms, to a more or less complete restoration to apparent health.

The most numerous examples of decided and lasting improvement occurred in patients in the second stage of the disease. Even in a few days the cough was mitigated, the expectoration diminished in quantity and opacity, the night sweats ceased, the pulse became slower and of better volume, and the appetite, flesh and strength, were gradually improved. There was generally a diminution

and gradual cessation of the crepitus; the breath-sound becoming drier and clearer; but the dullness and tubular character of the breath and voice sounds seldom exhibited any marked decrease till after several weeks' use of the oil, in conjunction with counter-irritation. In several cases in which the disease has existed long, the restoration has never been perfect; even when all the common symptoms have entirely disappeared, there have remained perceptible inequalities in the breath and stroke sounds generally with prolonged expiratory sound, which is more or less tubular towards the root of the lung. "These signs," says Dr. Williams, "I have learned, by the experience of many years, not to consider as exceptional against recovery, for they appear to be dependent on the puckering of the texture, often with pleural adhesions and old deposits in the bronchial glands, so frequently found after death at the summits and near the roots of the lungs of persons who have not for many years exhibited symptoms of any pectoral disease."

In the first stage of the disease, the results seem equally satisfactory. The good effect of the oil is commonly manifested in the abatement of cough and feverish excitement, and in the improvement of flesh and strength.—The physical signs of improvement are the same as those which take place tardily in the second stage, after the removal of the hard ronchi; and Dr. Williams believes that the treatment by the oil, combined with counter-irritation, seems to bring back the lungs from the stage of incipient softening to that of simple deposit, which is tardier in its changes of increase or diminution, and may remain long stationary without any obvious alteration.

In the third stage, the effects of the oil are often very marvellous. The whole number of cases with one or more cavities, as indicated by physical signs, which, under Dr. Williams' hands, manifestly improved, amounts to sixty-two. In thirty-four of these there was continued improvement up to the last reports. Eleven cases, which exhibited decided improvement for a time, have since again declined or terminated in death. Of the remaining seventeen, he has had no recent report, and does not know whether the amelioration has been permanent or not.—*Monthly Journal.—Western Lancet.*

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RESIGNATION OF PROFESSOR SHORT.

Professor Short expressed early last autumn to some of his colleagues a wish, on account of enfeebled health, to retire from his duties in the Medical Department of the University of Louisville; but as it was believed that the failure of his health was only temporary, he was dissuaded from resigning at that time. His health, we are happy to state, has been entirely restored, but the wish to escape from the labors and anxieties of office has continued in full force, and has been, at length, carried out. His letter of resignation was sent to the Board of Trustees on the 19th of June. The Board, as a just compliment for his long and faithful services to the institution, elected him "*Emeritus* Professor of Materia Medica and Medical Botany."

Professor Short has retired from a lucrative and honorable station in the prime of life, with all his faculties of mind and body in full vigor, and will now, we trust, devote his leisure to the completion of a task which the profession has long expected at his hands. For many years, he has been engaged in collecting the materials for a work on the Botany of Kentucky. His herbarium is one of the most extensive and complete in the country, and few men in it are as familiar with its flora. He is capable of producing a work of great interest, which

would confer credit upon the State, and be sought after by the scientific men of all countries.

The colleagues of Professor Short, on learning that his letter of resignation had been accepted by the Board, addressed to him the following communication:

"LOUISVILLE, June 19, 1849.

"*Dear Sir*—

It has been known to your colleagues for some time past, that it was your wish, at the first convenient moment, to relinquish the chair of Materia Medica and Medical Botany which you have so long held with credit to yourself and advantage to the school. It would have been most agreeable to your colleagues to have seen your connection with the school continued; but while such has been their feeling, they have not deemed that they had a right to urge you to a further sacrifice of your comfort and convenience. They are unwilling, however, that your official connection with them should be dissolved without an expression, on their part, of their sense of the important services you have rendered to the school, not only by your learned and able courses of instruction, but by your judicious counsels in the administration of its affairs. Nor can they allow the opportunity to pass without expressing to you the pleasure which they have derived from their official and personal association with you. They beg you to be assured that you carry with you into your retirement their highest regard and best wishes, and that they remain,

Very truly, your friends,

J. COBB,
S. D. GROSS,
H. MILLER,
L. P. YANDELL.

PROFESSOR OF MATERIA MEDICA IN THE UNIVERSITY OF LOUISVILLE.

Lewis Rogers, M.D., has been elected to the chair of Materia Medica and Therapeutics in the University of Louisville made vacant by the resignation of Professor Short. This announcement, we feel quite sure, will be received with pleasure by the friends of the school abroad, as it has been hailed with delight by the community of which Dr. Rogers is a member. Dr. R. has been known to the citizens of

Louisville from his youth up, and has for a number of years been one of the most popular and eminent practitioners in the city. His social qualities render him a worthy successor of a gentleman who is justly esteemed a model for his social virtues; while he brings with him into the school great professional zeal, and experience derived from long and daily intercourse with the sick. No fears are entertained by his friends that he will acquit himself with credit and win additional distinction in the new sphere of duty to which he has been appointed.

OZONE.

Professor Schonbein, the discoverer of gun-cotton, has proposed this name for an imaginary principle in the atmosphere, which he supposes to be evolved by electricity and to be concerned in the production of certain diseases. In some experiments made a few years since, a peculiar odor was remarked when electricity passed from pointed bodies into the air, and he supposed a substance was produced at the time similar to that which becomes apparent at the positive electrode on the decomposition of water, by a voltaic pile, or by the action of phosphorus on moist air. Owing to its offensive odor it was styled *ozone*, from *ozo*, to stink. What the peculiar matter is which gives rise to this odor has not been determined. Schonbein regards it as a compound of hydrogen and oxygen, the latter element being in excess—a deutoxide or tritoxide of hydrogen; but no analytical evidence has been brought to the support of this hypothesis. Berzelius and De la Rive attribute the odor to the presence of oxygen, modified either by electricity or by the catalytic activity of other substances—"an allatropic modification of oxygen." The substance, whatever it was, seemed to be a powerfully oxidizing agent, and when inhaled produced irritation of the air-passages, and all the symptoms of catarrh. As electricity is continually acting on the air, Prof. Schonbein concluded that ozone must be continually evolved, and must be productive of catarrhal and pulmonary affections. It was ascertained that iodide of potassium was decomposed by the body liberated in the electrical experiments; that paper rubbed with the iodide and starch became blue when exposed to its action. It was also remarked by Schonbein and his friends that the same discoloration took place when paper, so prepared, was ex-

posed to the air during the prevalence of influenza, and that the discoloration was most intense when influenza was at its height. Hence he concluded that ozone was the cause of influenza. This conjecture has been extended.

Influenza is frequently the precursor of cholera. Dr. Herrick and Dr. Bird, of Chicago, have inferred from this coincidence that they may have a common cause, and that this cause may be ozone. They think they have detected ozone in the atmosphere of Chicago since cholera made its appearance there.

Sulphur and its compounds decompose ozone, and therefore persons living near sulphur springs, or engaged in manufactures in which sulphurous acid is liberated, ought to escape the diseases to which it gives rise. Sulphur ought also to be a remedy for the diseases engendered by it. Such is the train of argument.

It would be difficult, we think, among the delusions of medicine, to find a better specimen of loose reasoning and hasty generalization than this ozone theory affords. We know not that such a substance exists. We are not sure that it is ever present in the air. If generated by electricity, there is no satisfactory proof that it is capable of producing the effects ascribed to it. If produced by electricity we cannot understand why its appearance should be periodical when the cause is continually operating. But supposing it to be established that it is the cause of influenza, a disease generally of cold weather, what probability is there that it is also the cause of cholera, a disease so different in character, and generally one of hot weather? Certainly few conjectures could be more absurd than that cholera and influenza are the products of the same poison. But conceding all this, is it true that cholera has avoided the vicinity of sulphur springs and manufactories? On the contrary, it was no where more fatal in Kentucky, in 1833, than in the neighborhood of some of its sulphur springs. And then as to the remedy. If sulphur decomposes ozone, does it hence follow that it will cure cholera? Allow that it may neutralize the poison, must it necessarily overcome the effects of the poison? But we need not push our objections further. The hypothesis is too flimsy to stand the slightest examination. Cholera, according to this crude notion, is to be cured by a few grains of sulphur, administered *pro re nata*.

DEATH OF PROF. BARBOUR.

Among the victims to cholera, in St. Louis, we are pained to see announced the name of Dr. Barbour, Professor of Obstetrics, in the University of Missouri. Prof. Barbour was a son of the late Governor Barbour, of Virginia. He was, for some time, a practitioner of medicine in Tennessee, and was thence called to a chair in the University of Missouri. As a lecturer he was fluent, earnest, and instructive, and as a practitioner he enjoyed a large share of public confidence. He wrote and published several papers which indicated sound judgment and practical tact, and were well received by the profession. To his other excellences, Dr. Barbour added the virtues of the Christian. He was a leading and active member of the Presbyterian church. In all the walks of life in which he was known, his influence was exerted for good, and his loss will be felt by the church as well as the school of which he was a member. We saw Prof. B. here in the spring. He was returning from a visit to his native State, in good health, and full of hope. With bright prospects before him, in the discharge of sacred professional duties, he has been suddenly cut down.

PROGRESS OF CHOLERA.

As was generally apprehended, cholera, since the commencement of hot weather, has made great progress in the Valley of the Mississippi. In New Orleans we no longer hear of the epidemic. It may be hoped that it has spent its force upon that ill-fated city, and will not soon return to it. Along the Mississippi, on the plantations, the ravages of the disease among the negroes is represented as having been frightful.

In St. Louis, the mortality has far exceeded that experienced from the epidemic in New Orleans. On the 21st of June the number of deaths had reached a hundred a day, and in a week from 700 to 1000 are reported to have died. Among the victims were some of the best citizens—the disease not being confined to the indigent and dissipated, nor to foreigners and those crowded into damp and filthy situations, although it cannot be doubted that the mortality was greatly increased by the immense number of immigrants pressing into St. Louis. The thermometer, in the shade, stood at 90° during the days when the pestilence was at its height.

About the middle of the month the epidemic reappeared at Nashville in a malignant form, and the mortality for a few days was alarming; but after a short reign it appears to have again subsided. Near the close of the month the number of fatal cases did not average more than three a day. It is worthy of special notice in reference to this city, that the disease was confined to a limited district. Nearly all the malignant cases occurred on the hill south of the University. In that neighborhood reside many of the best families in Nashville; and there died Prof. Hamilton and three sisters in the same house. While such was the fatality at that spot, the city proper was nearly exempt from cholera.

In Cincinnati, the epidemic had attained a fearful malignity towards the close of the month. The interments on the 27th are reported to have been about 150, of which 130 were Germans and Irish. This report is probably much exaggerated. We shall look with interest for an authentic account of the epidemic in the Western Lancet.

In Lexington, the whole number of deaths from cholera up to the 27th of June was 38, of which 17 were whites, and 21 blacks. The first fatal case occurred on the 11th of June, the day of the month on which the disease attained its height there in 1833. The number of victims to the epidemic in the Lunatic Asylum, at the last dates, was about 60. The first fatal case appeared in the Asylum on the 19th of May. Lexington, from present appearances, is likely to escape a severe visitation of the pestilence. But few cases were occurring about the end of the month.

In Louisville, as was mentioned in our last number, several well-marked cases of cholera appeared on the first of May, after a day of extraordinary heat, the thermometer having stood as high as 86° in the shade. From that time to the present, but few days have passed without a death from the disease in the city, and yet the number of fatal cases hardly now exceeds a hundred. Our colleague, Dr. Bell, a member of the Board of Health, has been at considerable pains to collect the statistics of cholera in the city, and we learn from an article written by him, in the Morning Courier, that after the disease had been prevalent fifty-five days, that is, up to the 24th of June, the number of persons who had died of it, was short of seventy. From the 25th to the 28th, inclusive, 30 deaths from cholera were reported by the Board of Health. The number of interments on the 27th was 22, the greatest number known in Louisville in one day in a period of twenty years. Of these, 9 were from cholera. The interments on the 28th were 19; of which 11 were

from cholera. For many days, during which the epidemic attained this mortality, the thermometer, at sunrise, ranged from 72° to 76°, and rose by 3 o'clock, P. M. to 92°, in the shade. On the evening of the 27th, after a day of intense heat, a heavy shower of rain fell, and on the day succeeding there was a manifest improvement in the health of the city. The number of deaths reported on the 29th and 30th was 13.

As in Nashville, so here the complaint has manifested its greatest malignity in a few circumscribed localities. Dr. Bell, in the article referred to, states, that of the first seventy cases that occurred in the city, fifty-three were afforded by a space not exceeding four squares. On Fifth street, near the river, 28 deaths occurred; on Water street, between Fifth and Sixth, including the alley, 7; on Water street, and the alley between Third and Fourth, 11; on Water street, from Third to Second, 5; and in Strader's Row, on the river, 2. This is more than five-sixths of the mortality in the city up to the 25th, while the space in which it occurred is less than one-twentieth of the city limits. The region thus signalized by the epidemic is one of the most crowded in Louisville, and certainly the most filthy. Most of the victims in this locality were foreigners, principally Irish and Germans.

The epidemic has existed here in its mildest and most manageable form. The cases have, with remarkable uniformity, yielded to treatment when attended to at an early stage. Neglect or intemperance has been the cause of the fatal issue in all but a few exceptional instances.

OHIO MEDICAL COLLEGE.

It was announced, a short time since, that the chairs in the Ohio Medical College had all been declared by the Board of Trustees vacant, preparatory to a reorganization of the Faculty. We learn from the public prints that the former professors have been restored, and that Dr. Drake and Dr. George W. Bayless have been added to their number. Dr. Drake takes the chair of Theory and Practice, and Dr. Bayless has been appointed to the chair of Descriptive Anatomy. We congratulate the friends of the school on the accession of so much talent to its able corps of teachers. Dr. Drake is now entirely at home—in the city and the chair of his choice, and in the school which he founded. He has our fervent wishes for long life and unvarying prosperity. Dr. Bayless is a practiced and thorough anatomist, and a good lecturer, and

with his industry and ambition to excel will not fail in the duties of his chair. The Ohio Medical College, one of the oldest institutions in the West, is so identified with our profession that no one who takes an interest in the latter can feel indifferent to the fame of the former. Every friend of true medical science must wish the college a speedy and complete triumph over those malign influences which have hitherto hindered its progress.

TRANSYLVANIA UNIVERSITY.

Prof. Annan has been transferred to the chair of Theory and Practice, lately vacated by Prof. Bartlett, and Prof. William M. Bolling, late of the Memphis Medical College, has been elected to the chair of Obstetrics and the Diseases of Women and Children, in Transylvania University. Prof. B. is well known to the readers of American medical journals as the author of many able papers on a variety of subjects. He is a writer of unquestioned talents, industry and learning, and although not so well known as a lecturer, the experience of one winter in Memphis authorizes the belief that he will not be less successful in that line. His reputation in the South is high, and his election will strengthen the school in that quarter. We tender to Prof. Bolling our cordial wishes for his success.

BOOKS RECEIVED.

Through Messrs. Beckwith & Morton, booksellers of this city, we have received from the publishers, Messrs. Lindsay & Blakiston, an interesting volume on Anesthesia, from the pen of Prof. Simpson, of Edinburg; and the neat and compendious work of Noad on Chemical Analysis, qualitative and quantitative. From Messrs. Barrington & Haswell we have received, through the same channel, the late edition of Gooch's Compendium of Midwifery; and to Messrs. Lea & Blanchard we are indebted for a copy of Mohr, Redwood and Procter's Pharmacy. Fuller notices of these works will appear as early as we can find room for them.